

Before the
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LIBRARY OF CONGRESS
Washington, D.C.

In the matter of:

The Digital Performance
Right in Sound Recordings || Docket No.
and Ephemeral Recordings || 2005-1 CRB DTRA
(Webcasting Rate
Adjustment Proceeding)

Volume 5

Room LM-414
Library of Congress
First and Independence Ave., S.E.
Washington, D.C. 20540

Monday,
May 8, 2006

The above-entitled matter came on for
hearing, pursuant to notice, at 9:30 a.m.

BEFORE:

THE HONORABLE JAMES SLEDGE, Chief Judge
THE HONORABLE WILLIAM J. ROBERTS, JR., Judge
THE HONORABLE STAN WISNIEWSKI, Judge

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I-N-D-E-X

<u>WITNESS:</u>	<u>DIRECT</u>	<u>CROSS</u>
E. Brynjolfsson	14	175

<u>NO.</u>	<u>DESCRIPTION</u>	<u>MARK</u>	<u>RECD</u>
15	The Economics of Internet Radio	211	
16	StationRipper Printout	248	
17	Audiocorder Printout	254	263
18	BlazeMediaPro Printout	264	266
21	Roxio Printout	269	
22	Kenswil Depo Excerpt	291	

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P-R-O-C-E-E-D-I-N-G-S

9:36 a.m.

JUDGE ROBERTS: On the record.

Good morning, everyone. We received notification that over the course of the next three weeks, the Library will be doing a practice emergency evacuation. Some of you who have been involved in prior proceeding might recall the real thing that took place since we were in hearing on September 11, 2001, but I'm glad to report this time it's a practice only.

We don't know at what time over the course of the next three weeks it's going to occur, hopefully, not a day like today weather-wise, but the protocol will be that when we hear the siren go off if you collect up your immediate belongings, you do not need to bring files or extensive material, but anything that you have a security interest in, I suggest that you attempt to bring it with you and we will immediately evacuate this.

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1 I will lead everyone out. What
2 we're going to be doing is going down the hall
3 to the stairwell immediately across from the
4 elevators going down to the ground floor and
5 exiting out the side of this building which is
6 the First Street side. And when you exit, you
7 need to cross the street to the side of the
8 street where the Canon House Office Building
9 is and we should be allowed to remain on the
10 sidewalk at the Canon building until such time
11 as the all-clear is given and we can then
12 return to the building.

13 If for some reason the alarm
14 should go off perhaps during the lunch recess
15 when none of the, myself, nor the other judges
16 are here, again then you would be on your own
17 to get down the hall and go down the
18 stairwell. There is a possibility that this
19 practice or emergency evacuation could a
20 shelter-in-place scenario in which case you're
21 in good shape because this room is designated
22 as a shelter-in-place location and you won't

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1 have to do anything.

2 But don't presume that simply
3 because the alarm went off it is shelter-in-
4 place and that you should stay here. You
5 would be notified by either a Library or a
6 Capitol police officer if it is a shelter-in-
7 place evacuation, again, in which case you can
8 remain right here in the room. So again, it's
9 going to happen sometime over the course of
10 the next three weeks and hopefully it will
11 just go fine.

12 (Discussion off microphone.)

13 JUDGE ROBERTS: Yes, there is a
14 chair located at the end of the hall for
15 someone who has any difficulty. I don't
16 anticipate that we would have anybody who is
17 disabled here, but there is a chair located at
18 the end of the hall to allow somebody to get
19 down the stairs. It's a fold-out wheelchair.
20 My recommendation principally on that though
21 is that if you do collect in the area right
22 where the elevator, if you for instance have

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1 some problem that does not allow you to get
2 down the stairs, the Library police will come
3 and get you and assist you to get down the
4 stairs. But the elevators are shut off during
5 an evacuation. So you cannot use the
6 elevators in any circumstance.

7 CHIEF JUDGE SLEDGE: Thank you.
8 Mr. Joseph.

9 MR. JOSEPH: Your Honor, at the
10 risk of asking a picky question you pointed to
11 the stairwell. Are you referring to the green
12 one or to the --

13 JUDGE ROBERTS: To the green one
14 down the hall. Yes. If you should make a
15 mistake and go the wrong direction, you will
16 see people exiting down the, I guess, that's
17 yellow there and you should just follow the
18 folks that are going down that particular one.
19 They will be exiting out of the back of the
20 building on the C Street side.

21 And there's nothing wrong with
22 that if you go the wrong way. Don't panic and

1 think "I'm separated from the group." We
2 can't do a head count of people since the
3 number of folks and their identity change in
4 this room. So there's no card to do a roster
5 check to make sure that somebody got out of
6 the building. So truthfully, it does not
7 matter whether you exit that side or you go
8 out the back of the building. We won't know
9 that you're missing.

10 CHIEF JUDGE SLEDGE: But
11 hopefully, if you will do that for yourselves
12 and know if somebody is missing. If perchance
13 it turned out not to be a drill, we'd like,
14 you and all of us would like to know that if
15 somebody is missing. Yes sir.

16 MR. OXENFORD: Your Honor, a
17 preliminary matter.

18 CHIEF JUDGE SLEDGE: Yes sir.

19 MR. OXENFORD: David Oxenford on
20 behalf of the Small Commercial Webcasters. I
21 understand last week there was a ruling made
22 on the admissibility or the process for

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1 admitting restricted documents in this
2 proceedings. I was not here and as I think we
3 discussed in the prehearing conference Small
4 Commercial Webcasters and I believe some of
5 the other parties will not be in regular
6 attendance here and will be relying on the
7 cross examination of other parties.

8 Yet parties such as my client, the
9 Small Commercial Webcasters, did produce
10 documents that are restricted that contain
11 confidential business information about those
12 parties' businesses. We're concerned about
13 the process that was apparently adopted last
14 week where a party has to be present in
15 essence to reject or to ask for a document to
16 be considered in camera. If we're not here
17 and a party offers a restricted document that
18 we had produced during discovery, we would not
19 be here to object to ask that it be considered
20 in camera and therefore the documents that we
21 produced pursuant to the Protective Rule,
22 pursuant to the understandings in the

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1 Protective Order, that documents would be
2 produced, would be considered at trial in
3 camera and according to paragraph 12 before
4 any restriction was lifted parties would be
5 given three days notice before the Board on
6 its own motion or the motion of any other
7 party lifted a restriction that we had placed
8 on a document because it contained
9 confidential business information.

10 We would ask for a modification of
11 the order, that procedure that you adopted
12 last week, to allow for a standing objection
13 from parties who aren't here to restricted
14 documents and notice be given before these
15 documents be admitted into the record if for
16 any reason the Board is on its own or on the
17 motion of other parties decides to lift that
18 restricted notice. That's what's contemplated
19 by paragraph 12 of the Protective Order on
20 which these documents were produced.

21 CHIEF JUDGE SLEDGE: Mr. Oxenford,
22 we'll discuss that at a recess, although I

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1 note that any time a party elects not to
2 participate and be present in a proceeding,
3 they do so at their own risk. But we will
4 discuss that.

5 MR. OXENFORD: I understand that,
6 Your Honor, but we did produce the documents
7 pursuant to the procedures set forth in the
8 Protective Order which do require three days
9 notice before any restriction is lifted.
10 Thank you very much.

11 CHIEF JUDGE SLEDGE: All right.
12 Mr. Smith, you're representing Sound Exchange
13 this morning.

14 MR. SMITH: I am, Your Honor, and
15 we call Eric Brynjolfsson.

16 WHEREUPON,

17 ERIC Brynjolfsson
18 was called for examination by Counsel for
19 Sound Exchange having been first duly sworn,
20 assumed the witness stand, was examined and
21 testified as follows:

22 DIRECT EXAMINATION

1 BY MR. SMITH:

2 Q Could you state your full name for
3 the record?

4 A Eric Brynjolfsson.

5 Q And where are you employed?

6 A AT MIT, The Massachusetts
7 Institute of Technology.

8 Q What is your educational
9 background?

10 A I have an undergraduate degree
11 from Harvard University in Math and Economics,
12 a Masters degree from Harvard University in
13 Math and Decision Sciences and a Ph.D. from
14 MIT in Managerial Economics.

15 Q What position do you hold at MIT?

16 A I'm the Schussel Professor of
17 Management. I'm also the Director of the
18 Center for eBusiness.

19 Q Okay. As a professor of
20 Management, what part of MIT are you located
21 in?

22 A I'm in the Sloan School of

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1 Management which is the Business School and
2 specifically within the Business School, I'm
3 in the group that focuses on information
4 technology.

5 Q Okay. Can you tell us what the
6 Center of eBusiness is and that's little e,
7 capital B, eBusiness?

8 A That's right. The Center of
9 eBusiness is a research center that I founded
10 about six years ago. It's now the largest
11 research center at MIT Sloan School and it
12 focuses on understanding how the internet and
13 related technologies are affecting business
14 and commerce.

15 Q Can you describe the scale of that
16 center?

17 A Yes, there are about 30 faculty
18 now who are involved in research on these
19 issues and we receive funding from the
20 National Science Foundation and other
21 government groups as well as a dozen or so
22 corporations worldwide that are interested in

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1 understanding better how the internet is
2 affecting business and commerce.

3 Q Can you tell us your primary areas
4 of scholarly study?

5 A My research focuses on the
6 economics of information and information
7 technology including the productivity effects,
8 the pricing and market structure for digital
9 information goods, the bundling and
10 aggregation of digital information goods and
11 how markets and organizations are affected by
12 advances in information technology and the
13 internet in particular.

14 Q Would you try to keep your voice
15 up a little bit? I know you're used to
16 standing up and talking. What do you mean by
17 the term "information goods"?

18 A In most of my research, I define
19 "information goods" as goods that are
20 produced, composed, primarily of bits as
21 opposed to atoms such as most of the goods
22 that are available on the internet. They have

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1 very low or zero marginal cost of
2 reproduction, high fixed cost and that leaves
3 us some interesting economic questions and
4 some interesting business strategy pricing
5 issues.

6 Q I take it you've published
7 articles in the areas you describe as your
8 primary areas of scholarly study.

9 A Yes. I've published dozens of
10 articles in this area. I've written several
11 books in this area, articles in referee
12 academic journals, top academic journals.

13 Q And have you received awards for
14 some of those publications?

15 A Yes, so far on six occasions,
16 fellow academics have recognized my research
17 with Best Paper Awards. For instance, my
18 paper on bundling of information goods,
19 pricing profits and efficiency was recognized
20 as the best paper in the field of marketing
21 science and I've received other such awards.

22 Q Do you teach in the area of

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1 information technology and the pricing of
2 information goods?

3 A Yes. I created the first course
4 on the business aspects of the internet at MIT
5 and I've been teaching that more or less ever
6 since with the exception that I went to
7 Stanford for two years where I created and co-
8 taught a similar course at Stanford University
9 and this past year I've been at Harvard
10 University. I was invited to be a Marvin
11 Bower Fellow which actually doesn't have any
12 teaching obligations, but I spent the year
13 interacting with my colleagues at Harvard
14 Business School. This year I'm back at MIT
15 but not this semester I'm teaching a Ph.D.
16 seminar on the Economics of the internet and
17 of Information Technology and how it's
18 affecting organizations and in the fall, I'll
19 be teaching my MBA course which is called "The
20 Economics of Information."

21 Q Now have there been publications
22 that have commented on your stature in the

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1 field of the academic study of information
2 technology?

3 A Well, in addition to the academic
4 awards, there has also been articles in the
5 public in the popular press that have
6 discussed my research and my qualifications.
7 For instance, *Business Week* did an issue where
8 they identified the five eBusiness visionaries
9 they called it and they recognized me as one
10 of those. *Optimize* magazine just last fall
11 did a poll of their readers and they voted me
12 one of the top two most influential academics
13 in the field of technology and business.

14 Q What is *Optimize* magazine?

15 A It's a leading publication focused
16 at senior executives and professionals who
17 focus on information technology, but it's more
18 of a management oriented magazine.

19 Q Do you lecture around the country
20 periodically on topics like eBusiness and
21 information technology?

22 A Yes. I'm frequently to give

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1 speeches all over the world actually. I agree
2 to give a number of those each year. I've
3 probably given about two dozen keynote
4 speeches in the past two years at various
5 conferences in Europe, Asia, the United
6 States. For instance, I gave the keynote
7 speech at the Gardner Data Center Symposium.
8 There were probably about 8,000 people in
9 attendance there and I've given a couple dozen
10 such keynote speeches typically focusing on
11 the economics of information technology and
12 its effect and the effects of the internet.

13 Q Do you also serve, Professor, on
14 the boards of various institutions in the
15 public and private sectors?

16 A Yes. I'm on the -- I've given
17 talks for the Federal Reserve Board as well as
18 -- And now I'm serving on the Academic
19 Advisory Board of the Federal Reserve Bank of
20 Boston. I'm also on a number of boards of
21 smaller companies, start-up companies as well
22 as a publicly-traded company.

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1 Q What do you do for the Federal
2 Reserve Bank of Boston?

3 A I give advice to the Governor of
4 the Federal Reserve Bank of Boston and there's
5 a group of academics who meet several times
6 each year to discuss the economy. I believe
7 that the reason they asked me to serve on that
8 board was because of my expertise in how
9 information technology is affecting the
10 economy and the growing role that it's having
11 on commerce.

12 Q In what role do you play with
13 respect to the companies where you serve on
14 the board?

15 A I'm on the board of directors of
16 some of these companies. I think they
17 typically turn to me for advice on pricing of
18 information goods and services and management
19 expertise advice on how businesses can benefit
20 from information technology and use it in
21 their operations.

22 Q Now, Professor, previous to your

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1 work on this case, have you had any involved
2 with the recording industry?

3 A No.

4 Q Have you developed familiarity
5 with the way music is being delivered to
6 consumers?

7 A Oh, very much so. I mean it's a
8 major focus of my research as I mentioned. So
9 many of the articles that I wrote have been
10 specifically motivated by what's happening in
11 the music industry and the recording industry
12 obviously that's an excellent example of a
13 digital information good available over the
14 internet, one that you can't help but notice
15 how that instrument is being transformed. So
16 my research papers have focused on that. I
17 also use it quite extensively in my teaching.

18 Q In your research and scholarly
19 inquiry, Professor, have you developed a fair
20 amount of hands-on experience yourself with
21 the internet and how it works?

22 A Well, I'm -- Actually in addition

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1 to my research, I'm personally very fascinated
2 by the way the internet works and affects
3 business. After I graduated from college, I
4 started a technology-oriented company and I've
5 done start-ups that were involved in using
6 information technology and personally, I just
7 spend a lot of time on the internet and enjoy
8 exploring new technologies as they emerge on
9 the internet.

10 Q And have you had the occasion in
11 your work on this case to become more familiar
12 even with the way music is being digitally
13 delivered these days?

14 A Yes. One of the reasons I agreed
15 to serve as an expert witness is because I
16 enjoyed the chance to read in more detail the
17 documents about how the music industry has
18 evolved on the internet.

19 Q Are you a consumer of music
20 digitally delivered on the internet?

21 A Yes, I am. I've been listening to
22 internet radio for a long time as well as

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1 other forms of digital music and I actually
2 made a special effort recently to listen to a
3 variety of different internet radio groups.

4 MR. SMITH: Your Honor, at this
5 time I would offer Dr. Brynjolfsson as an
6 expert in the business of digital distribution
7 of information and the pricing of information
8 goods.

9 CHIEF JUDGE SLEDGE: Any objection
10 or voir dire?

11 MR. STEINTHAL: Yes Your Honor.
12 Ken Steinthal on behalf of the -- I prefer to
13 reserve my voir dire for cross if that's okay
14 with the panel and preserve any motions
15 against the foundation for this testimony
16 until then.

17 CHIEF JUDGE SLEDGE: By reserving
18 your objections, then you will have waived the
19 testimony that was presented on direct as an
20 expert.

21 MR. STEINTHAL: Well, Your Honor,
22 I could go through a voir dire now.

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1 CHIEF JUDGE SLEDGE: I'm not
2 encouraging you to do that.

3 MR. STEINTHAL: My point is simply
4 that I have no problem with the witness
5 testifying subject to a voir dire in which if
6 we feel that there's no basis or foundation
7 for parts of his testimony we would have the
8 right to make the motion to strike those
9 portions for which he lacks foundation as an
10 expert and I think that Your Honors would be
11 in a better position to evaluate such a motion
12 after hearing testimony and the voir dire.

13 CHIEF JUDGE SLEDGE: Thank you.
14 Mr. Joseph.

15 MR. JOSEPH: I was actually going
16 to say something very similar to Mr.
17 Steinthal. Great mind.

18 MR. SMITH: Your Honor, I think
19 we're mixing together two issues. There may
20 be a foundation objection that they want to
21 make to some particular statement that he may
22 make. I'm asking for him to be recognized

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1 generally as an expert to give the testimony
2 and I think that I've laid a foundation for
3 that.

4 CHIEF JUDGE SLEDGE: Without
5 objection, the offering is accepted.

6 By MR. SMITH:

7 Q Professor Brynjolfsson, what were
8 you asked to do as an expert in this
9 litigation?

10 A I was asked to provide an
11 assessment of what a willing buyer and seller
12 would agree to as a rate for webcasting?

13 Q And what methodologies for
14 achieving that goal did you consider?

15 A Well, right off the bat, I
16 considered two broad methodologies. One of
17 them you call a benchmark analysis where you
18 look at existing agreements in similar
19 markets, related markets and made any
20 necessary adjustments to see how applicable
21 they would be to the webcasting market. A
22 second approach would be to look at the

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1 webcasting market itself, understand the
2 economics of that market, in particular, the
3 relevant revenues and costs and from that
4 determine what a willing buyer and seller
5 would agree to.

6 Q And which of those methodologies
7 did we ask you to employ as an expert?

8 A The second one which focused on
9 analyzing the revenues and costs in the
10 webcasting industry.

11 Q And it's your understanding that
12 another one of the Sound Exchange experts is
13 going to present benchmark testimony.

14 A Yes, that's my understanding.

15 Q Now focusing then on the test of
16 the methodology you used, the cost and revenue
17 analysis, is that a fair term for it?

18 A Yes, that's good.

19 Q Is that a methodology that's a
20 standard in your field?

21 A Yes, it's the standard methodology
22 I mean. Virtually every case I teach for my

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1 MBA students we do some sort of a cost and
2 revenue analysis. We look at the bargaining
3 power as well I should mention. It's
4 fundamental in economics that when you want to
5 understand the economics of an industry, you
6 have to understand the relevant revenues and
7 relevant costs and when there's a transaction
8 you look at, the surplus is created from
9 revenues minus costs and the bargaining power
10 that divides that surplus. So that's
11 something that I do in my teaching, my
12 research.

13 Q And you talk about that as a
14 method for establishing the market price for
15 a particular good.

16 A Yes, I think it's arguably the
17 basic thing we teach in business schools when
18 we look at how markets work.

19 Q Okay. Now can you evaluate for us
20 the relative strengths of the different
21 methodologies, the benchmark methodology and
22 the cost and revenue methodology?

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1 A Well, I think they've both very
2 useful and appropriate methods for determining
3 the appropriate rate. In a sense, I think
4 they complement each other. The benchmark
5 method looks at actual agreements from a
6 related market but then there may be some
7 adjustments that are needed to adapt over to
8 the market that you're looking at. The cost
9 and revenue analysis looks at the market that
10 you're interested in, but there aren't
11 necessarily actual agreements you can use.

12 However, any rational buyer and
13 seller are going to take into account the
14 costs and benefits when they make those kinds
15 of decisions. So we're essentially doing the
16 same thing that a buyer and seller would do
17 and hopefully coming to the same conclusions
18 that they would do. So both of these
19 methodologies should give you a similar answer
20 and if you can triangulate on it from these
21 two different perspectives, I think that would
22 give you more confidence in the underlying

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1 conclusions.

2 Q Now in your written direct
3 testimony, Professor, you adopt two different
4 ways of analyzing costs and revenues that you
5 call Model 1 and Model 2. Can you tell us
6 just generally what those two models are?

7 A Sure. Well, the basic idea of my
8 analysis is to understand what are the
9 revenues and costs and from that, determine
10 what the surplus is that's created by this
11 transaction and that amount of surplus needs
12 to be divided between the parties of the
13 transaction and the way it's going to be
14 divided is a function of their bargaining
15 power. If one party has more bargaining
16 power, they'll get more surplus.

17 In the case of Model 1, what we do
18 is we start with the, what I do is I start
19 with the assumption that the previous CARP
20 made an accurate assessment of what a willing
21 buyer and seller would agree to and then we
22 look at how things have changed since 2001.

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1 We look at any changes in the costs since
2 then, any changes in the revenues since then
3 and that gives us an assessment of the changes
4 in the surplus that's available. So we can
5 kind of basically update the previous number
6 based on what's changed since then.

7 Q And how does that contrast with
8 Model 2?

9 A So with Model 2, we don't make any
10 assumption that the previous rate was accurate
11 or inaccurate. We just do a ground up. We
12 start fresh and we say just based on the data
13 today, what is the available surplus and so we
14 start and calculate what is the total revenues
15 that we can identify, what are the total
16 costs, what's the relevant bargaining power
17 and then we look at how that would lead to a
18 rate, how that surplus would be divided
19 between the buyer and the seller.

20 Q And you use the term "surplus"
21 here. Can you give a little better
22 explanation about what you mean by that term?

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1 A Sure. When two parties come
2 together for a transaction if there's a
3 transaction to be made, that means that the
4 parties are made better off by that
5 transaction. So let's me give you an example.
6 If I were to sell you this pen and if it costs
7 me 40 cents to produce the pen and you were
8 willing to pay \$1.00 for the pen after we did
9 the transaction, there would be 60 cents of
10 surplus traded, the dollar value minus the 40
11 cents of cost to me. So there is 60 cents of
12 surplus created from that transaction.

13 Now we have to decide how we're
14 going to divide up that surplus and that would
15 a function of our relative bargaining power.
16 If we each had equal bargaining power, 50/50,
17 maybe I would get 30 cents of surplus and you
18 would 30 cents of surplus in which case the
19 price would 70 cents.

20 Q And that concept of surplus
21 figures into both Model 1 and Model 2.

22 A Exactly. The key part of each

1 model is determining how much surplus was
2 created by webcasting and will be created over
3 the period of the rate.

4 Q Focusing first on Model 1, the
5 changed circumstances model, can you tell us
6 again or perhaps in more detail what kind of
7 assumptions you make about the rate that was
8 set for webcasting in 2001?

9 A Model 1 starts with the assumption
10 that using all the available of that period,
11 the CARP accurately assessed what a willing
12 buyer and seller would agree to back in 2001.
13 It starts with that number.

14 Q Now beyond assuming that the CARP-
15 set rate was a valid market rate, have you
16 done any assessment of whether that is in fact
17 a valid market rate?

18 A Well, all the evidence suggests
19 that that rate was probably a valid rate and
20 in particular, that it wasn't set too high.
21 I may have been set too low. The reason we
22 can be fairly confident that it wasn't set too

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1 high is that since that period there's been
2 continued investment by webcasters. The
3 market value of some of the webcasters has
4 gone up significantly. There's been entry by
5 companies versus Clear Channel has a large
6 number of radio stations that have decided to
7 start webcasting. So these voluntary
8 decisions by buyer and by sophisticated
9 investors to move into this market that it's
10 a profitable thing for the buyers, the
11 webcasters, to move into this market and that
12 the rate was appropriate in that sense.

13 It's hard to know whether the rate
14 may have been set too low since there's no
15 real mechanisms to raise the rate.
16 Effectively, the rate was a ceiling not a
17 floor. So the record labels had no choice but
18 to provide the services. If they thought that
19 it was set too low, they weren't allowed to
20 stop providing the services. So all we can
21 really know with some confidence is the rate
22 was not too high, but it may have been too low.

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1 Q Now there has been a significant
2 amount of webcasters that have left the
3 marketplace over the past four or five years
4 and consolidation has certainly been evidenced
5 in this.

6 A Well, you shouldn't be --

7 MR. STEINTHAL: Your Honor, I
8 object to the form.

9 CHIEF JUDGE SLEDGE: Sustained.

10 BY MR. SMITH:

11 Q Has there been leaving as well as
12 entering the market?

13 A Yes and you shouldn't be
14 distracted by that. In any new market,
15 there's going to be a lot of churn and a lot
16 of companies starting and starting a lot of
17 non-viable business models that are started.
18 I've studied the internet and the business
19 there for 15 years. You see -- Well, we see
20 a flurry of new companies starting. Many of
21 them with non-viable business models or bad
22 management or just not very good ideas.

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1 It's not just the internet. Every
2 industry has that. If you go back to the
3 automobile industry in the 1920s, there were
4 hundreds of automobile companies as people
5 tried different models. Then as the market
6 matures, you inevitably have some
7 consolidation as successful business models
8 and good management emerges.

9 In this particular case, that
10 standard consolidation was exacerbated by the
11 fact that the initial rate was actually set at
12 zero. Before the CARP set their rate, the
13 webcasters had to pay nothing at all. Music
14 are naturally considered non-viable, fly-by-
15 night operations started up with not having to
16 pay anything at all for the music and once
17 they had to pay even a small amount, they
18 realized that they couldn't sustain their
19 models.

20 Q Before we get into the details of
21 our --

22 A I'm not finished talking. The

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1 more relevant thing is that the major
2 sophisticated webcasters decided to enter,
3 increase their investment companies like Clear
4 Channel moving in. I think that's a much
5 clearer signal of where the rate was.

6 Q Before we get into the details of
7 your analysis, I wonder if we could start with
8 the answer which is out of your written direct
9 testimony I'm putting up as demonstrative, but
10 just as the terms you used in recommending to
11 the Board a rate for statutory webcasting and
12 I'd ask you, Professor, if you could sort take
13 the Board through the recommendations that you
14 offered.

15 A Sure. So to preview the
16 conclusions there -- Is it okay if I just
17 stand up?

18 Q Yes.

19 A So let me start with the -- The
20 second part's a little bit simpler, more
21 straightforward. We did an economic analysis.
22 I looked at the costs and revenues and

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1 determined that a willing buyer and willing
2 seller would agree to a rate that 17/100th of
3 a cent per sound performance in 2006 rising to
4 37 one hundredths of a sound performance in
5 2010 and I'll provide the details of that
6 calculation or it's in the report, my written
7 testimony. So that would be the rate that a
8 willing buyer and seller would agree to.

9 I also looked at the mobile
10 market, the opportunity to provide music on
11 mobile devices like cellular telephones and it
12 was clear that there's a much greater amount
13 of economic surplus from that because when we
14 bring the music, consumers put a lot more
15 value on that. That market is just emerging
16 literally.

17 As I was writing my report in
18 October, new services were being added. A lot
19 more of them have been added just in the past
20 few months. I've made a preliminary estimate
21 of that, but I didn't put it in my report.
22 But one thing that was very clear is that the

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1 number would be much higher for mobile
2 services than for the services on the desk
3 top.

4 And thirdly, I noted that it was
5 extremely easy to pirate the music, to rip the
6 streams, to capture the radio streams and
7 store them on your hard disk and it's clear to
8 me that no willing buyer, no willing seller
9 would agree to provide the music in an
10 unprotected form because that would jeopardize
11 all their other revenue streams, their CD
12 sales, the digital downloads. Even radio
13 itself would be jeopardized if people widely
14 just copied the music onto their hard disk.
15 So that's the essence of the basic
16 recommendation.

17 Q Okay, and then if you could look
18 to the more complicated recommendation and
19 tell us why you went there.

20 A Well, this comes right out of the
21 economic model. One concern that people might
22 is that it's sometimes difficult to make

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1 predictions about the future out as far as
2 2010. Normally, contracts wouldn't be set for
3 that long a period in an industry like this.
4 You would normally set shorter contracts.

5 But given that the contract goes
6 out to 2010, you need some mechanism for
7 potentially considering unexpected
8 improvements or changes in the industry and
9 the standard mechanism, this is something that
10 businesses encounter all the time, of course,
11 as well when they set contracts. They make
12 contracts under uncertainty just as we do in
13 this room. And when you set contracts under
14 uncertainty, a standard arrangement is to use
15 revenue sharing or to use some way of sharing
16 the risk. The idea is that if things turn out
17 better than expected then both the buyer and
18 seller share in the upside and if things don't
19 turn out as well as expected, then they both
20 share in the downside. So that's why this
21 model includes a provision for revenue
22 sharing.

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1 Now if you were to use this number
2 literally, it would -- Well actually before,
3 so revenue sharing by itself helps with the
4 risk allocation, but there is a potential
5 problem with revenue sharing. It's not a
6 panacea and the problem is that a webcaster
7 may have opportunities to derive benefits,
8 revenues, from webcasting that don't show up
9 in their income statement in the webcasting
10 area.

11 From instance, webcasting services
12 may generate revenues on Yahoo's home page or
13 they may generate more subscribers to AOL's
14 basic services. So there are lots of other
15 benefits and in discovery, it was very clear
16 that the webcasters consider these other
17 benefits very important. Clear Channel also
18 said that the webcasting was a very useful
19 service for their over-the-air radio
20 audiences. So for all these reasons,
21 webcasters can capture the benefits in other
22 areas.

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1 Furthermore, some webcasters may
2 not even be trying to maximize revenues.
3 There are nonprofit webcasters and webcasters
4 who are in the business for non-economic
5 reasons. And last but not least, there may be
6 webcasters who just aren't very competent or
7 efficient in generating revenues and may just
8 fail at generating revenues. So if you only
9 had it linked to revenues, there would be the
10 possibility that some webcasters would report
11 zero revenues. We don't want to have to pay
12 anything and they get these other benefits or
13 whatever.

14 So in any kind of contract, it
15 makes sense to have some kind of a guaranteed
16 minimum that we share revenues but if the
17 revenues are really low, we have to have some
18 minimum. That's where we had the structure
19 where it's the higher of either the revenue
20 sharing or this minimum amount and you'll note
21 that the minimum amount is less than the
22 amount we recommend here.

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1 What I've done is that these are
2 shaded back both the share of revenue and the
3 minimum amount by about 20 percent from what
4 it would be if you only used one or the other.
5 That way if it turns out that things are
6 better than expected, the record labels get
7 some of the upside. If things are worse than
8 expected, then the webcasters will not have to
9 pay as much, but there's a flaw on that. If
10 they report extremely low revenues, they still
11 have to pay at least a minimum if they want to
12 stay in business.

13 So that's the essence of this
14 difference here. It provides a mechanism for
15 risk sharing with a guaranteed minimum. And
16 then the other two components are very much
17 the same as what they were in the basic
18 proposal.

19 Q Let me ask you, Professor. What
20 would be the effect of having a lesser or
21 rather than a greater of standard on the two-
22 sided --

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1 A This is the higher of and that's
2 the lesser of.

3 Q Yes.

4 A Well, that would be like the worst
5 of both worlds and then you wouldn't get the
6 risk-sharing benefits and furthermore, then if
7 you did have companies that are choosing not
8 to make any revenues or recording revenues in
9 other parts of their business and not in the
10 webcasting, you're almost giving companies an
11 incentive to find a way to report zero
12 revenues. So that would be -- That wouldn't
13 make any sense.

14 Q Now let me ask you just for
15 context. How do the rates you're proposing
16 compare with the rate that was in effect in
17 2005?

18 A The rate through 2005 was about
19 7/100ths of a cent per sound performance. So
20 you can see this one is a bit more than double
21 from what the current rate and that's what my
22 best estimate of what a willing buyer and

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1 seller would agree to if they were to have a
2 free market agreement today and as the
3 economic values improves because the costs are
4 going to continue to fall, I think there's
5 little dispute about it, the revenues are
6 going to continue to rise, there will be even
7 more economic value by 2010. So it will rise
8 to, what is that, several times more than the
9 current rate, about five times more than the
10 current rate.

11 Q Can you explain, Professor, why
12 you preferred to have the rates step up over
13 time rather than simply some single rate for
14 the whole five year period?

15 A Well, you could -- So over time,
16 it's clear that the economic value is going to
17 grow. I think that it's clear that the costs
18 are going to continue to fall. Most of the
19 main costs are bandwidth which we know is
20 going to fall, but the revenues are going to
21 continue to improve. So this more closely
22 matches up with actual a willing buyer and

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1 willing seller would agree to. It would be
2 gradually increasing surplus and both parties
3 would share in that surplus over time.

4 Now I suppose one thing you could
5 do is you could sort of average out what the
6 total was for all five years, kind of take a
7 weighted average and say from the beginning
8 you have to pay for that. But it's more
9 common to have this gradual ramping natural
10 business contract. It's also very common to
11 have this kind of structure. That helps a bit
12 with the risk sharing as well. Webcasters
13 initially when they aren't making as much
14 surplus wouldn't have to pay as much and they
15 wouldn't have to in a sense pay up front for
16 surplus that we anticipate that they would
17 have in future. They wouldn't pay until they
18 actually earned it.

19 Q Let's talk a little bit about the
20 mechanics of how you went about your study,
21 Professor. Putting together information and
22 reaching your conclusions, were there persons

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1 or entities who provided material assistance
2 to you?

3 A Yes. In particular, I had done a
4 little work in the past with the Analysis
5 Group and it's an economic consulting firm and
6 they helped sift through a large number of
7 documents and bring documents to my attention
8 that they thought would be useful for this
9 analysis. We also worked with Professor
10 Yannis Bakos. He's an expert on the economics
11 of the internet and one of the people who
12 wrote many of the seminal papers on the
13 economics of the internet. And we hired him
14 to help in a similar capacity going through
15 the voluminous documents. Yannis also helped
16 quite a bit with some of the economic modeling
17 discussions to make sure we were getting
18 things right.

19 Q Have you worked with him in the
20 past?

21 A Yes, he's been a coauthor on some
22 of the papers. In fact, he was a coauthor on

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1 one of the award-winning papers I mentioned
2 earlier on the pricing on the internet and
3 I've known him since -- I think I met him at
4 MIT about 15 years ago.

5 Q Let me ask you about the
6 information gathering phase of your study.
7 What exactly did you try to do there?

8 A Well, the first thing we did was
9 we spent a lot of time trying to get access to
10 every available document that was in the
11 public domain on this topic as well as
12 purchasing documents from analysts' reports.
13 We'd sit around and brainstorm how else can we
14 get information about this. We went to
15 investment banks. We went to the internet.
16 There are some news letters on the internet
17 that focus on this and we brought all of those
18 together.

19 One of the things the Analysis
20 Group helped me with was just highlighting,
21 going through the documents and highlighting,
22 ones that may have a fact or a number that

1 would be relevant to this analysis.

2 Q And what particular topics were
3 you looking for information about?

4 A Particularly about information
5 relevant to the revenues and costs of
6 webcasting.

7 Q Now I want to ask you a few
8 questions about the characteristics of the
9 hypothetical marketplace that you were
10 modeling here. Who did you assume the sellers
11 would be?

12 A For our modeling, we consider the
13 sellers to be the record companies.

14 Q And who did you assume the buyers
15 would be?

16 A I consider the buyers to be the
17 webcasters.

18 Q And were there particular
19 webcasters that you focused on in doing the
20 economic analysis?

21 A Most of the analysis applies
22 broadly to any kind of a webcaster, but my

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1 analysis primarily focused on large webcasters
2 seeking to make a profit, economically viable
3 webcasters. I believe those would be the ones
4 that would set the market price in some sense.
5 Those would be the relevant webcasters for the
6 market price.

7 Q What product did you assume was
8 being bought and sold?

9 A Any blanket license to the sound
10 recordings, the copyrights owned by the record
11 companies.

12 Q Now did you develop an assessment
13 of the relative bargaining power of this
14 hypothetical buyer and seller in this
15 marketplace?

16 A Yes. So as I mentioned, to do
17 this analysis you first have to figure out how
18 much surplus is available but then you have to
19 decide how that surplus is going to be
20 divided. When there's a transaction, the
21 buyer and seller are each going to typically
22 want to get some portion of the surplus and

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1 the way that's divided up is a function of
2 their bargaining power. If the two parties
3 have equal bargaining power, a natural
4 division is 50/50. But if one party has more
5 bargaining power, then they're going to get a
6 bigger share of the surplus and the other
7 party will less of the surplus.

8 In this case, I looked at the
9 industry. It's the kind of thing I do
10 frequently in my research and I came to the
11 conclusion that the record companies have far
12 more bargaining power than the webcasters.

13 Q Can you explain to the Court why
14 the record companies have more bargaining
15 power?

16 A A lot of it comes from the basic
17 characteristics of the product and the
18 ownership of that. The webcasters own the
19 copyright of these blanket licenses to the
20 music which are very valuable and by law, you
21 cannot copy them without their permission.
22 You can't use them without their permission.

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1 So it's indispensable to webcasting to have
2 access to the sound recording.

3 In contrast, the webcasters are an
4 industry which has extremely low barriers to
5 entry. That means that it's very easy to get
6 into this industry. I could tomorrow set up
7 a webcasting service under turnkey operations
8 that let you do this. There's no
9 indispensable asset. You can buy bandwidth.
10 You can buy the service. So it's not hard to
11 become a webcaster and companies are entering
12 that quite easily.

13 The record companies also have a
14 number of different channels that they can
15 sell their music through. Indeed, they sell
16 most of their music through other channels.
17 So it's not essential for them -- They can
18 walk away from a contract if they want to;
19 whereas the webcasters really if they're going
20 to be broadcasting, they need access to the
21 music. So it's very asymmetric in that sense.

22 When they come together, the record labels

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1 are in much stronger position to be able to
2 make a take-it-or-leave-it offer to the
3 webcasters.

4 Q Did you make any assumption about
5 the extent to which a webcaster would need to
6 get a blanket license from all four the major
7 record companies at least for operating in
8 that business?

9 A Yes. Although in principle it's
10 possible to have a very focused channel that
11 just had a few sound recordings, if you want
12 to be a very large successful webcasters, you
13 would want to get blanket licenses from all.
14 If you're playing safe, I think you want to
15 have the top forty stations which a lot of
16 people listen to sort of by definition.
17 That's why it's top forty. That would involve
18 music from all of the different labels and the
19 labels aren't really specialized in any
20 particular genre. So even if you wanted to
21 have a station that was focused on folk music
22 (Inaudible) or whatever, you would need to get

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1 music from all of the four labels to really
2 maximize your profits.

3 Q Now what effect does that have on
4 the bargaining power of the record companies
5 and the webcasters?

6 A Well, that's another thing that
7 gives the record companies a lot more
8 bargaining power. Although there's some room
9 to play the record companies off one against
10 another, in general the goods are not good
11 substitutes for each other. If I want to
12 listen a song by Madonna, then it's not a
13 substitute to say "We don't have that, but we
14 can give you this other song." People have
15 preferences for songs. That means that the
16 record companies have more bargaining power.

17 Q Let me shift gear slightly and ask
18 you. What in your expert opinion would be the
19 economic effects of setting the rate in this
20 kind of proceeding below the free market rate?

21 A Well, if you made a mistake and
22 you set the rate too low, that could be very

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1 damaging to the industry. Obviously, it's
2 going to be damaging to the record companies.
3 They won't be earning as much revenues if it's
4 set too low and that's going to undermine
5 incentives for creation of content. In our
6 system, the main incentive for creating
7 content is the economic incentive and if
8 people don't have any incentive, then less
9 creative works are going to be created over time
10 and that ultimately will hurt consumers as
11 well.

12 Interestingly, because this is an
13 industry with very low barriers to entry, the
14 webcasting industry has very low barriers to
15 entry, if you set the rate too low, while it
16 may briefly provide some surplus to the
17 webcasters, that would be quickly competed
18 away as new people enter. This is a process
19 economists call "rent dissipation" that when
20 there are excess profits saying in the
21 webcasting industry people will say, "Hey,
22 there are some profits to be made." They will

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1 set up webcasting services. They will move
2 in. The result is actually destructive to the
3 webcasting industry as well, the buyer's side,
4 because then you end having a duplication of
5 fixed costs. You have a bunch of people
6 setting up these fixed costs, generating up
7 extra costs, not necessarily any additional
8 music provided, just the same set of
9 categories. So you have extra costs without
10 any additional music and the same music pie,
11 the same revenue pie, just gets divided more
12 thinly across different people. Each of the
13 webcasters would actually have to share that
14 pie with more webcasters. There would be more
15 fixed costs and this would be very
16 destructive.

17 This may sound a little abstract,
18 but it's well documented that this happens in
19 many industries. In fact, Berry and Waldfogel
20 did a study of the over-the-air broadcasting
21 industry and they concluded after careful
22 analysis that this rent dissipation from

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1 excess entry destroyed about 45 percent of the
2 economic value in that industry. So it may
3 seem like you're taking from one party and
4 giving to the other, but in practice, you're
5 just destroying a lot of economic value if you
6 set the rate too low.

7 Q Now by contrast, what would be the
8 economic effects of setting the rate too high,
9 above the free market level?

10 A If you set the rate too high, that
11 wouldn't be great either if the rate just
12 stayed at that level. Fortunately, when you
13 set the rate, it's effectively a ceiling not
14 a floor. There is nothing preventing the
15 record labels from striking a deal with Yahoo
16 or AOL or anybody or all of them for lower
17 rates or lower rates on part of their catalog.

18 So there's an opportunity for the
19 market to self correct. There may be some
20 transaction costs involved with that. So I
21 don't think it's necessarily a perfect
22 mechanism, but at least there's an opportunity

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1 for self correction there. The record
2 companies would not have an interest in
3 setting the price above the profit maximizing
4 level.

5 If you're selling something, it's
6 not advantageous to set the price infinitely
7 high. You'd want to set it at a price where
8 you would earn significant profits and
9 revenues. So if the rate were set too high,
10 the willing buyers and willing sellers will
11 have an incentive to renegotiate a better rate
12 and my understanding is that they're perfectly
13 allowed to do that.

14 So the costs and benefits are very
15 asymmetrically set. If you set it too low,
16 there's no mechanism to correct this other
17 than this rent dissipation which destroys
18 value. If you set it too high, there is at
19 least the possibility that they would choose
20 to renegotiate and my sense is the incentives
21 would be there for both parties to do that.

22 Q Now you talked about how you went

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1 through a process of trying to gather all the
2 publicly available data on the economics of
3 webcasting. Did you develop an assessment
4 about the current economic condition of that
5 industry?

6 A Yes. It's very clear at least to
7 the calculated observer that this is an
8 industry that's growing rapidly with a very
9 bright future and that assessment is
10 underscored when you look closely at the
11 underlying data. I think every serious
12 analyst that's looked at it whether they're
13 investment banks, third party analysts or the
14 webcasters themselves come to the same
15 conclusion that this is an industry with a very
16 bright future as this chart here, this is from
17 my testimony, shows there's been tremendous
18 growth in the number of tuning hours that
19 people are listening to.

20 Q For the record, it's the graph on
21 page 11 of your written direct testimony.

22 A Right. You can see since 2002

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1 there's been more than, what, more than a
2 doubling, nearly a tripling of the number of
3 hours. So there's tremendous growth and the
4 projections are that that kind of growth is
5 going to continue not just in aggregate tuning
6 but in revenue, advertising rates,
7 subscription revenues and on the cost side,
8 the costs are coming down. That's pretty much
9 a consensus in the industry.

10 Q Now let's talk some more then
11 about Model 1 and the changed circumstances
12 model. What particular changes, what
13 particular revenues and costs, did you look at
14 in studying changed circumstances?

15 A Well, what you would want to do
16 when you look at the Model 1 update from the
17 previous rate is understand how the revenues
18 changed and how the costs change and the
19 revenues include both advertising revenues and
20 subscriptions revenues for the webcasters and
21 the costs include variable costs and fixed
22 costs.

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1 Q These are all costs and revenues
2 to the webcasters.

3 A Yes.

4 Q Can you tell me? Did you also
5 look at the changes in costs and revenues of
6 the recording industry?

7 A We considered that but ultimately
8 we didn't think that was necessary. We made
9 the very conservative assumption that there
10 was zero costs on the part of the recording
11 industry that they had. Some of their costs,
12 they had developed this catalog and that they
13 could free provide that catalog. In truth,
14 there are some costs associated with it and if
15 we included those, that would lead to a higher
16 rate because the bases would be higher.
17 Furthermore, we made no provision for covering
18 the development costs of creating the content
19 in the first place and as webcasting becomes
20 a bigger share of revenues over time which we
21 know it's going to, you would need to make
22 more and more of a provision for those fixed

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1 costs of the recording industry.

2 So by knowing those, we really
3 were artificially conservative and if we had
4 included them, the actual rate recommendation
5 would have been somewhat higher. But for
6 simplicity, we decided just to focus on the
7 webcaster. I think those are going to be the
8 main costs that are going to matter anyway.

9 Q Now was there a particular unit
10 that you used in studying both the costs and
11 revenues of the webcasters?

12 A Yes. The numbers are provided to
13 us in lots of different ways, the costs for
14 performance revenue for hours. We decided to
15 standardize in our report. In my report,
16 you'll see that all the data is pretty much
17 standardized in terms of listening hours. So
18 we looked at cost per listening hour, revenues
19 per listening hour and compared those.

20 Q And just so it's clear, the
21 sources of the data that you presented in your
22 October testimony were what?

1 A They are just publicly available
2 data or data we purchased, sometimes it would
3 be an expense I guess, from investment banks
4 and companies that specialize in analyzing
5 this industry. But they weren't from
6 discovery.

7 Q Have you had the opportunity since
8 then, since October, to look at documents
9 produced in discovery and compare them with
10 the results that you estimated back in
11 October?

12 A Yes. After I submitted the report
13 and after the team provided me with the
14 documents, we got a large number of documents
15 from the webcasters. They weren't always very
16 well organized and sometimes it's difficult to
17 make sense of them, but we were able to
18 understand how the costs and revenues had
19 changed in the past and going into the future
20 and it was clear that indeed we had been
21 conservative. My estimates were on the low
22 side. The economic value and the improvement

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1 in the economic position of the webcaster
2 since the last part actually have appears to
3 have been even greater than what I estimated
4 in my October report and their projections for
5 the future in general were more optimistic
6 than what I predicted. Do you want me to go
7 into detail on that?

8 Q Why don't we wait until after.
9 We'll get to that later. Now we're turning
10 back to the October time period. Were there
11 times when you ran into data that were
12 inconsistent from different public sources?

13 A Yes. Occasionally, different
14 people would have different estimates of what
15 the cost of bandwidth would be for instance or
16 what the average revenue per hour for
17 webcasting and --

18 Q What did you do in that situation?

19 A Well, we tried to -- I used my
20 best judgment of what a fair and reasonable
21 number would be, generally somewhere in the
22 middle of the different estimates. If --

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1 Generally, my practice was to resolve the
2 uncertainty in the general of being
3 conservative. That is if there really were
4 some doubts, I wanted to use the number that
5 would lead to a lower rate rather than a
6 higher rate so that errors would be more
7 likely to be in the direction that the true
8 rate would be higher. And what we did
9 discover, we found that by and large, we had
10 been conservative. Not every single number
11 ended up being conservative. There were some
12 numbers that went in different directions but
13 the overall picture if you look at the bottom
14 line revenues per hour and costs per hour,
15 it's clear that we were in fact conservative.

16 Q Okay. Let's talk about webcaster
17 costs first and let me ask you. What are the
18 main categories of costs that you took into
19 account for webcasters?

20 A So costs can be turned as I
21 mentioned into the fixed cost of setting up an
22 operation, just the cost to set up the

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1 operation and get it going for a given scale,
2 and the variable costs, the costs that vary
3 with additional tuning hours. So every
4 additional hour that you broadcast to a
5 listener, there may be some additional costs
6 associated with that. So we looked at each of
7 those.

8 Q Okay. Just leaving aside
9 royalties, what are the variable costs for
10 webcasting?

11 A The overwhelming variable cost by
12 far is the cost of bandwidth. That's the
13 actual cost of delivering the bits. So the
14 music as you is transformed into bits, zeros
15 and ones, and delivered over the internet and
16 webcasters have to pay for bandwidth to
17 deliver to their subscribers and that is by
18 far the largest variable cost.

19 Q Okay. Now as your analysis
20 developed, which turned out to be more
21 significant leading to your conclusion about
22 a recommended rate, the fixed cost or the

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1 variable cost?

2 A Well, once you get beyond a
3 certain scales, it turns out not only is the
4 bandwidth the main variable cost, it's just
5 the main cost in general. The variable costs
6 of bandwidth dominate for most webcasters.
7 The fixed costs become relatively unimportant
8 in dimension. You can set up a webcasting
9 operation fairly cheaply.

10 Q That said, let's start with fixed
11 costs since that's what you started with.

12 A Okay.

13 Q Putting up table one from your
14 written direct testimony, Professor, I would
15 ask you to explain this table and essentially
16 the question is how did you go about
17 estimating changes in the fixed costs of
18 webcasters starting in 2001 and then coming to
19 the present and into the future?

20 A Is it okay if I stand just to
21 point to this?

22 Q Yes.

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1 A So back in 2001, we wanted to get
2 an estimate of what the fixed costs for a
3 large webcaster. Fortunately, there was an
4 academic paper on exactly, that exactly
5 covered this topic by Ting and Wildman and
6 they estimated the fixed costs of webcasters
7 of various sizes and that's what appears here
8 in the first column.

9 I report the sizes in two
10 different ways. You average quarter hours and
11 aggregate tuning hours. Do I need to define
12 those?

13 Q I think you should probably
14 explain what those two are just so we know
15 what we're dealing with here.

16 A Okay. So average quarter hours is
17 the number of people listening to a stream of
18 music for at least five minutes during any
19 quarter hour. So if you were to listen to
20 music for at least five minutes, that would
21 count, during this quarter hour, that would
22 count as one quarter hour if I were to do

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1 that. So it counts off the number of people
2 who are doing that. So it's a snapshot at any
3 given time.

4 Aggregate tuning hours is just the
5 total number of hours that are listened to
6 over the course of a month. I've done
7 everything here in terms of a month of
8 service. You can actually convert one to the
9 other. The norm in the industry is that there
10 are 30 days in a month and that there are 18
11 hours in a day because they only count hours
12 from 6:00 a.m. to 12:00 midnight. So if you
13 multiply 30 times 18 times the number of
14 average quarter hours you get the aggregate
15 tuning hours. So these numbers are sort of
16 two ways of saying the same thing.

17 Q So 2001, you estimated the fixed
18 cost or you took the fixed cost from --

19 A Yes, I didn't estimate them.
20 These are the numbers from Ting and Wildman.

21 Q And then --

22 A And they were -- In turn, you can

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1 see there are two separate categories. You
2 see equipment. To set up a webcasting
3 operation, you need hardware. You need the
4 hard disk, the server, the web server that
5 you've heard about and you need the personnel
6 to run a webmaster, somebody to kind of manage
7 the cost and those are the two main costs.

8 Q And what did Ting and Wildman
9 conclude about fixed costs in 2001?

10 A That the total monthly fixed cost
11 as you can see here were about \$25,000 for a
12 webcaster of this scale.

13 Q What is that per listener hour?

14 A It's a less than half a cent per
15 listening hour. This is a relatively small
16 webcaster and you can take all the fixed costs
17 and you equally allocate them across all the
18 hours. That will work out to a little less
19 than a half a cent per hour.

20 Q What did you do for 2005 then?

21 A So going forward, we wanted to
22 apply this to the webcasters that we know

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1 about and in particular as I mentioned in the
2 beginning, I focused primarily on the large
3 webcasters, the ones that are economically
4 successful and we looked at the five biggest.
5 For this chart, I looked at the five biggest
6 webcasters and I picked a scale that was equal
7 to or less than the smallest of the five
8 biggest webcasters and that was about 37000
9 A.H or 20 million aggregate tuning hours and
10 what we needed to was update the costs from
11 2001 to the current period. So we made two
12 kinds of adjustments to update them.

13 First off, we had to consider the
14 bigger scale. Now as I mentioned, Ting and
15 Wildman had a number of different sized
16 webcasters. So we could basically run a
17 regression to see how as you increase the size
18 how did the cost change. So we just did a
19 linear regression, extended, extrapolated that
20 to see what the costs would be for a larger
21 webcaster. And you could extend from, they
22 went up to actually 20,000. So you go up to

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1 20,000. You extend it out to 37,000 A.H and
2 that gives you this proportional increase in
3 the cost.

4 So basically, the idea is that if
5 you're bigger, you need more of these servers.
6 That costs more. You need more personnel.
7 Maybe you have to hire another webmaster to
8 manage it. So that's this additional cost
9 here and that accounts for the bigger scale.

10 But there's been another change
11 since 2001, one that's been favorable to the
12 webcasting industry and that is the cost of
13 this equipment has fallen quite a bit. As you
14 know that laptop is a lot cheaper now for the
15 same size hard disk, the same cost that it is
16 than it would have been last year or years ago
17 or equivalently you can get twice as big a
18 hard disk at the same price.

19 Well, that's happened to all
20 categories of computer equipment including the
21 equipment used for webcasting. There's been
22 tremendous declines in the price of the

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1 equipment. The Bureau of Labor Statistics
2 publishes the official price index for this
3 equipment and they report that the price has
4 fallen by 15 percent per year for this
5 category of equipment.

6 So what we did was we updated the
7 cost for the equipment. In 2001, for every
8 dollar that you had to spend in 2001 given
9 that it's declined by 15 percent per year
10 compounded, you only have to spend about 52
11 cents to buy the identical equipment today.
12 The price has been coming down. So when you
13 consider that the scale is bigger, but you
14 don't have to pay as much for the equipment as
15 you used to in essence you can buy twice as
16 big a hard disk as you could for the same
17 price and so forth. That gives what the
18 current costs would be for an operation of
19 that scale.

20 Q Okay. And then what did you do on
21 the personnel side?

22 A Well, personnel, we haven't

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1 advanced the way computers have. So we don't
2 have a cost adjustment factor and so there's
3 no update there in terms of the pricing. We
4 just used the data direct.

5 Q And could you just review for us
6 how you estimate the fixed cost of what
7 webcasters will change?

8 A Well it' ---

9 Q For the present and into the
10 future?

11 A Yes. So as you can see, the
12 prices for this larger webcaster per aggregate
13 tuning hours are less than half of what they
14 were back in 2001 and they will continue to
15 fall quite a bit from about 0.2 of a penny
16 down to 0.014 of a penny per every hour. We
17 just allocated the fixed costs over that.
18 Actually, I think that's a very conservative
19 number.

20 Q Can you tell us why?

21 A Well, this is the number from Ting
22 and Wildman, but if you look at some of the

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1 other reports, for instance, Kurt Hansen did
2 a newsletter and he said the cost of setting
3 up a webcaster in 2003 at this sort of scale
4 was about half of the numbers that I'm using
5 here, about \$10,000 for a webcaster larger
6 than this one. And you can actually go on as
7 I mentioned and set up a webcasting service.

8 So in terms of delivering the
9 webcasting services, these are conservative
10 numbers, but they are already so small. I mean
11 even if you were to double them or cut them in
12 half it's not going to fundamentally change
13 the cost structure of the industry. This is
14 not a big part of the overall costs, just
15 setting this up and it's getting smaller over
16 time.

17 Q Good. Let's turn then to
18 bandwidth costs if we could. I'm going to put
19 up Table 2 and ask you to do the same thing.
20 Explain to us how you analyzed the changes in
21 bandwidth costs.

22 A Sure. So bandwidth is one of the

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1 biggest costs, the biggest cost, of
2 webcasters. The nice thing about bandwidth is
3 it's very predictable, very easy to measure
4 how these prices have declined. It think
5 there is little dispute among people of the
6 industry that these bandwidth prices are just
7 plummeting. It's very easy to verify that.

8 And indeed, when you look at the
9 retail prices that are reported by streaming
10 media and other sources, you see that the
11 prices are falling quite a bit by an average
12 of somewhat over 25 percent per year over the
13 past five years. So we extrapolate that
14 continuing. It was over 25 percent. We have
15 extrapolated at continuing 25 percent per year
16 into the future. So you can see how the
17 prices will fall over time.

18 I have a great deal of experience
19 with this industry and I can tell you that if
20 anything these numbers are conservative. I
21 wouldn't be surprised or I would expect
22 actually they would fall probably by more than

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1 this amount. While a lot of predictions about
2 the future are difficult, it's actually quite
3 easy to make predictions about bandwidth.
4 Moore's Law which is the doubling of computer
5 power every 18 months is the main driver
6 behind bandwidth costs. It's mainly the
7 function of the rotors and switches on the
8 internet which are really computers and as we
9 continue to have advances in that technology,
10 we're going to continue to have declines in
11 prices.

12 I spent some time talking to
13 senior executives at Intel and other companies
14 that make the basic technology and MIT
15 computer scientists and they're very confident
16 that prices are going to continue falling at
17 at least this rate if not more and certainly
18 they have for a couple of decades. So we're
19 having a big decline in the basic retail
20 price.

21 Q Did you then have to convert it
22 into the price that webcasters would pay?

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1 A Right. So in practice, nobody
2 pays retail especially large webcasters. They
3 can get big discounts. They can commit to
4 large amounts of bandwidth at a time. So they
5 just get a discount and if you look at the
6 actual prices that are paid that's reported in
7 public documents, those are about 70 percent
8 less than the retail prices. So we need to
9 adjust these prices downward to account for
10 that discount that the large webcasters get.

11 Q These prices are in what unit over
12 here on the left side of the chart?

13 A So what I did is I was measured
14 them in gigabytes, a billion byte. A byte is
15 eight bits of information. But when people
16 broadcast, they broadcast in kilobits per
17 second as the typical unit of measure. But
18 you can convert one to the other if you
19 multiply kilobits by eight million it will
20 give a gigabyte. Eight for the bits to bytes
21 and then one million for kilo to giga. So for
22 broadcasting at any given bit rate, you can

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1 calculate how many gigabytes of bandwidth are
2 required. We just do that conversion over
3 here.

4 Q And did you come up with estimates
5 about the price of bandwidth per listener
6 hour?

7 A Yes. Well, the cost of bandwidth
8 per listener hour is going to be in part a
9 function not only of the cost for a gigabyte
10 of information but also how many bits you
11 choose to stream. You can stream music at low
12 bit rate, lower quality, or at a higher
13 quality. Most broadcasters stream for their
14 advertising supported services at less than 50
15 kilobits per second. So we use that as a
16 conservative upper bound. If you multiply, do
17 the arithmetic here, that works out to be
18 about half a cent per listener hour for cost
19 for bandwidth.

20 Q And what is the effect of assuming
21 that the bits rates will go up on the
22 advertising services?

1 A Well, you notice that I didn't
2 just choose a constant rate for the bit rate.
3 You could just keep broadcasting the same
4 quality of music indefinitely. But I suspect
5 that as bandwidth gets very, very cheap and
6 cheaper and cheaper as it has in the past, one
7 of the things that the webcasters will choose
8 to do is deliver higher and higher quality of
9 music. It usually gets more like CD quality
10 as opposed to say AM quality. So that means
11 they'll be using more bits and as a result, I
12 assume that they wouldn't get all of the cost
13 savings from the lower price. In essence,
14 they would give some of the benefit to the
15 consumers in the form of higher quality music,
16 music that's more of a substitute for say CDs
17 as opposed to the music that they're
18 broadcasting today.

19 But even with that consideration,
20 even with them broadcasting by the end of the
21 period twice as high a bit rate as they do
22 today, the prices still drop by more than

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1 half. And I should note that probably the
2 music is going to increase even more than the
3 bit rate because the codecs, the premium code
4 higher quality of music for the same number of
5 bits as well. So there are advances on
6 multiple fronts. By the end of the period,
7 I'm predicting extremely high quality music.

8 Q You said that the prices have
9 dropped by more than half. What comparison
10 were you drawing there?

11 A Okay. Well, I mean -- So I just
12 mentioned the end of the period. But probably
13 another interesting one especially for the
14 case for the sake of Model 1 is to look at how
15 things changed say from when the CARP was set
16 in based on 2001 data to today. Back then,
17 the cost of delivering music as you can see
18 was about two and a half cents, more than two
19 and half cents, per listener hour. That is to
20 say if you wanted to broadcast an hour of
21 music to a listener, you would have to pay two
22 and a half cents in bandwidth.

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1 Since then even though we're now
2 assuming an increased number of bits being
3 delivered, the price has dropped about
4 fivefold to only about half a cent per
5 listener hour. So just that by itself is a
6 two cent improvement. If nothing else
7 changed, the webcasters now have two cents
8 less in cost and they're delivering a better
9 service purely because of the improved
10 economics of bandwidth which are very well
11 established.

12 Q Where in your projections does the
13 cost go by 2010?

14 A Then if it continues, it's going
15 to drop at least in half again for even as the
16 number of bits doubles. So it goes down to
17 less than a quarter of a cent by 2010. I'm
18 very confident of that.

19 Q These are figures for advertising
20 based webcasting.

21 A Hm-hm (yes).

22 Q Did you also look at some --

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1 CHIEF JUDGE SLEDGE: Is that a
2 yes?

3 THE WITNESS: Yes. Sorry.

4 BY MR. SMITH:

5 Q Did you also look at subscription
6 based?

7 A Yes, so advertising based
8 broadcast at a certain bit rate. It's common
9 for the webcasters that have subscription
10 services to often offer higher bit rate,
11 typically around 128 kilobits per second. So
12 we used the conservative upper bound of 150
13 kilobits saying that they're broadcasting at
14 an even higher level.

15 As you can see, it's about three
16 times as much, three times as good quality as
17 the advertising based services. So that works
18 out today to be about 1.5 cents per hour that
19 it would cost to deliver that high quality
20 stream and again, I assumed that that
21 bandwidth, the quality of that stream, would
22 increase to the end of the period to 242

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1 kilobits per second. So that's extremely high
2 quality, one that nobody listens to today but
3 as bandwidth gets very cheap. I just assumed
4 that they would spend more on bandwidth. Even
5 with that extra improvement quality, there's
6 still almost a two-thirds drop in the price of
7 bandwidth. So that by the end of the period,
8 it's a little over half a cent.

9 Q What period of time were looking
10 at on the subscription side?

11 A Yes. You'll notice that I only
12 just started, what was it, after about 2005.
13 Subscription services didn't exist or weren't
14 significant last time around. They've become
15 much more popular. So we really only started
16 including those currently. It's one of the
17 innovations that webcasters have done to
18 deliver more value.

19 Q Have a seat, Professor. Now,
20 without getting into the specifics until later
21 in your testimony, I want to ask you to just
22 to refer, and I'll do this a couple times, to

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1 what you learned by looking at documents we
2 got in discovery but we want to try to put all
3 details in one place.

4 A Okay.

5 Q Can I ask you? Did you compare
6 your estimates of bandwidth cost with
7 materials that were received from the
8 companies in discovery.

9 A Yes.

10 Q And generally speaking, how did
11 they -- Did you find corroboration or not?

12 A Yes. We did compare them.
13 Unfortunately, they didn't provide, most of
14 the webcasters did not really provide, this
15 kind of detail, but some of the webcasters --

16 Q Okay. Let's not get specific
17 here.

18 A Okay. Sorry. So, yes, they did
19 provide corroboration. I will be happy to
20 discuss that in more detail. In particular,
21 the evidence suggests that I was unduly
22 conservative with these numbers. That the

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1 data we say was that webcasters are actually
2 paying a lot less, about 40 percent less, than
3 even these numbers that I reported here and
4 that those prices have been declining.

5 Q Let's turn then to revenue of
6 webcasters and start with subscription revenue
7 if we could, Professor.

8 A Okay.

9 Q This is Table 5 from your
10 testimony. Can you explain to the Board how
11 you went about estimating subscriptions
12 reviews from 2005 to 2010?

13 A Sure. This is very
14 straightforward. So we just talked about the
15 cost side and now we're going to talk about
16 the revenue side. You can go and subscribe to
17 a webcast service and you pay a monthly rate
18 for that and those monthly rates range from
19 \$3.00 up to about \$5.00. We take the numbers
20 sort of towards the lower end of that range to
21 be conservative, \$3.33 per month. So that's
22 how much the webcasters take in in revenue for

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1 each subscriber each month for their
2 webcasting services.

3 Now as I mentioned, I'm trying to
4 have everything comparable in terms of
5 listening hours, costs and revenues per
6 listening hours. So I wanted to convert that
7 \$3.00 per month per listener, \$3.33 per month
8 per listener, to an hourly revenue rate. So
9 I needed to estimate the number of hours that
10 people listen to subscription services. I was
11 not able to identify any place where they
12 specifically stated that in any document.
13 However, it was recorded that at Live365 the
14 average listener listens to the radio nine
15 hours per month and in other documents,
16 AccuStream reported that subscribers listen on
17 average three to five times as much as the
18 average listener to advertising. So if you
19 multiply the nine hours per month by three to
20 five, you get 27 to 45 hours per month as sort
21 of a range for how much subscribers listen to.

22 AccuRadio also report that their

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1 "active listeners," they have a group they
2 call active listeners, listen, it goes 25
3 hours a month. It's something in my document.
4 It's in the 20s per month. So to be
5 conservative, we picked 40 sort to towards the
6 higher end of that range. The reason that's
7 conservative is that if you take a certain
8 number of dollars and divide it by a larger
9 number of hours, you get fewer dollars per
10 each hour. So by taking a high number like 40
11 and a relatively low number like \$3.33 for the
12 revenue per month, we get a conservative
13 estimate of the revenue that they earned per
14 listener per hour.

15 Q What's your estimate of the
16 revenue per listener hour for 2005?

17 A So for 2005, you simply divide the
18 \$3.33 by 40 and you get eight cents and .33,
19 8.33 cents per listener hour of revenue.
20 Again, that's a conservative number, a very
21 straightforward estimate of the hours.

22 Q How about projecting now how those

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1 revenues will change over the next five years?

2 A Well, we didn't have any detailed
3 data on what the projections were. But we
4 want it to be conservative, the inflation
5 rate. The CPI rate is estimated to be on the
6 order of three percent per year. So we just
7 assumed there essentially was no change in the
8 real price, that the price would just
9 nominally change at the rate of inflation and
10 that's how these numbers were updated.

11 In practice, I think that's an
12 extremely conservative number. In comparison,
13 you compare, take the satellite radio. The
14 satellite radio as they matured, they now
15 charge \$11/\$12 per month for a subscription
16 service. Currently, satellite radio has
17 benefits in terms of mobility, but it also has
18 disadvantages. Internet radio you have a much
19 wider range of streams. In fact, you can get
20 much more focused streams on the internet.
21 There is just a lot more choice, whereas,
22 satellite radio, there's a set number of

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1 stations and the mobility disadvantage of
2 subscriptions I think is disappearing, going
3 to go away as wireless internet access becomes
4 more ubiquitous with WiFi and WiMax.

5 So rather than having it converge
6 towards what satellite radio might be for \$10
7 or more, I chose the conservative assumption
8 that there would be essentially no real change
9 in the prices because I want to -- if there is
10 some uncertainty error on the side of picking
11 the lower number. But even with that you get
12 by the end of the period just from inflation
13 about almost ten cents per listener hour of
14 revenues.

15 Q Now those four rows there of zeros
16 underneath the row where you estimate the
17 subscription revenue, can you tell us what
18 that is?

19 A Well, while you can earn revenue
20 from subscriptions, that doesn't prevent you
21 if you want to from also earning revenue from
22 advertising at the same time. When I read the

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1 *Wall Street Journal*, I pay for that. But I
2 also pay a monthly amount for that and I also
3 see ads and a lot of satellite radio also
4 shows ads on many of their channels and indeed
5 if you go to AOL, you pay a subscription, but
6 you also see ads on most of their services.

7 But to be conservation, I assumed
8 just no additional revenue from advertising.
9 On discovery, I recognized that there are some
10 of the companies, I won't say which ones, that
11 have plans or are considering plans to include
12 advertising. Of course if you included
13 advertising on top of the subscription
14 revenues, that would only lead to greater
15 revenues per listener hour.

16 Q Now having covered subscriptions,
17 then let's just see if we can cover the
18 advertising revenues, Professor. I just put
19 up Table 3 from your written testimony and ask
20 if you could to explain this slightly more
21 complicated chart about how you estimated
22 advertising revenues for 2005 through 2010.

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1 A Sure. Well, this chart is more
2 complicated but conceptually it's the same
3 thing. We're just looking at the total
4 revenues that you could earn per hour and
5 allocating that. Now advertising there are
6 lots of different ways you can earn
7 advertising and I have to say webcasting has
8 been very creative in developing new ways of
9 advertising. If you go to AccuRadio, they
10 have a rate card with 12 different kinds of
11 advertising and they keep things of new ones
12 it seems every year or every month.

13 But for simplicity, to make them
14 all fit in a table I guess, we only look at
15 four categories. We could have looked at the
16 other ones, but we just focused on four, what
17 I consider probably the most important
18 categories of advertising and those are radio
19 spots.

20 That's sort of the instream audio,
21 just like over-the-air radio. You might hear
22 a 30 second spot of audio advertising.

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1 Display ads, you're familiar with
2 those as well. Those are the banner ads that
3 appear on virtually every website, various
4 sizes and shapes. We picked the smallest one
5 as the one that we focused on here, but
6 sometimes they're much bigger.

7 Video Gateway ads, that's
8 something that's more common in radio than it
9 is, internet radio, than it is elsewhere.
10 What video gateway ads, it mentions gateway,
11 are an ad that appears before you start the
12 stream. So if you turn on your player, you
13 can have an ad that appears and you have to
14 listen to that, kind of like when you go into
15 movie theaters. Sometimes there's an ad what
16 they call sort of the previews or whatever
17 before you see the movie itself. Those are
18 extremely lucrative it turns out.

19 And then last but not least, we
20 looked at channel sponsorship. So the idea
21 there is that a company like Daimler Chrysler
22 could buy out an entire channel just advertise

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1 Jeeps. So you go there and there's no radio
2 spots or display ads from other companies.
3 They've kind of just covered the entire
4 website and sponsored it basically.

5 So there are four important
6 categories. They're not the only ones, but
7 for simplicity and to be conservative we just
8 focused on those four categories.

9 Q Okey now in order to develop
10 revenue estimates for 2005, can you tell us
11 first of all what were the elements that go
12 into calculating revenue in the advertising
13 area?

14 A Yes. So what we're interested in,
15 the bottom line of course is what's the total
16 revenue earned per hour. But there are
17 different ways that you can slice that and
18 then a common way you can slice that is what
19 is the price you can charge per spot, how many
20 spots do you have available and what
21 percentage of those do you sell. So the CPM
22 is the price you can charge. That stands for

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1 cost per thousand, cost per mil. That's to
2 show and added to 1,000 listeners you would
3 pay with the CPM is. So, for instance, for
4 display ads, you just made \$3.00.

5 Then the inventory is how many of
6 those ads you have available. For band ads,
7 we assume 15 of those per hour. It's
8 customary to show a new band ad as each new
9 song starts and they are 15.36 songs per hour
10 is the standard assumption. We just dropped
11 the decimal and we assumed there's just 15 to
12 be a little conservative.

13 And then there's the sell out
14 rate, what share of those actually get sold.
15 There are those available stops, but they
16 don't necessarily successfully sell every one
17 of those. If you multiply those three numbers
18 together, that gives the total revenue that
19 you earn from that category of advertising.

20 Q Okay, and this table again is
21 based on publicly available data.

22 A Yes, there are a number of people,

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1 particularly AccuStream, that did market
2 research reports that reports what companies
3 are charging for ads and how many they're
4 selling and what the norms are.

5 Q Okay, and can you just review your
6 conclusions about how advertising revenue for
7 the large webcasters, what it's like now and
8 where it's going?

9 A Yes. So what we concluded was
10 that if you look at each of these different
11 categories based on the publicly available
12 data, they earn revenue from all of these
13 different categories and others. But counting
14 these, it adds up to about 3.33 cents per
15 listener hour of advertising revenue that they
16 earn.

17 Q And how is that going to change
18 over the next five or six years?

19 A Well, this is an industry with a
20 very bright future for advertising.
21 Advertising actually has been very
22 disorganized on internet radio. It's really

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1 just emerging. I mean if you look at your
2 discovery, you can see that the webcasters are
3 making progress in leaps and bounds,
4 literally triple digit improvements each year
5 in the past year or two. So and the
6 advertising rep firms have also made similar
7 statements that they're really just getting
8 their act together. So there's potential for
9 tremendous improvement as they improve that.

10 In particular, I think there are
11 three things that indicate that there's going
12 to be a big improvement in this industry.
13 First off, there haven't been reliable metrics
14 and ways of measuring it and an advertiser is
15 naturally very hesitant to advertise if there
16 aren't good metrics. Those are just emerging
17 and as those emerge people will come in and
18 start advertising.

19 Secondly, just the scale of the
20 industry makes it a big difference. If you're
21 a small industry with very few viewers, not
22 only do you have fewer impressions you can

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1 sell, but it's hard to get the interest of
2 national advertisers like the car companies,
3 the soda companies and so forth.

4 Today we're getting to that level
5 of scale. It's been shown in other context,
6 for instance, people with the cable television
7 that as the scale grows not only do the number
8 of impressions grows, but the price per each
9 ad grows dramatically as well as you're able
10 to reach a broader audience and that's been
11 well documented. The same thing is going to
12 happen in internet radio.

13 And then the third point is
14 perhaps the most subtle one, but I think it's
15 the most interesting and important and that is
16 internet advertising has a potential to really
17 target your customers. I see car ads all the
18 time on television and I don't really pay
19 attention to most of them. But last year, I
20 bought a new car and actually was listening.
21 I wouldn't skip over the commercials. I would
22 listen closely to them because I was a car

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1 buyer.

2 Well, the car companies have no
3 interest in showing me an ad if I'm not going
4 to buy a car. So if they can somehow target
5 and know that I was in the market for a car,
6 those ads would immensely more valuable, ten
7 times more valuable probably than they would
8 be just showing them to random people.

9 That's hard to do in most
10 broadcasts, but on the internet you actually
11 have the potential to really target your ads
12 and the technologies for that are just
13 emerging. Understanding a lot about your
14 customers, different customers, each person
15 could get a different ad based on the
16 demographic information, your previous web
17 surfing history and also all sorts of other
18 information. As a result, advertising rates
19 are going to rise quite a bit. That's
20 something that's well understood among people
21 who have studied the internet and do marketing
22 on the internet. And that give you the

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1 potential to have much more valuable
2 advertising.

3 Despite all those improvements, we
4 are actually being very conservative in where
5 our projections are. By the end of the period
6 in 2010, we're only projecting ten cents per
7 hour of revenue. One benchmark you could look
8 at is over-the-air radio advertising. The end
9 predicted by 2010 over-the-air advertising on
10 over-the-air radio, different market, will
11 earn about 15 cents per listener hour and you
12 can't even do the kind of targeting and so
13 forth I just described over the air.

14 So we're actually predicting a
15 smaller number than this other medium. People
16 who have looked at the two media think that if
17 anything the advertisement opportunity here is
18 greater and in discovery we found that the
19 webcasters had come to that same conclusion
20 that they've stated that this is a better
21 medium than over-the-air is for advertisers.
22 So ultimately, I think this is a conservative

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1 number, but it still ends up reflecting a
2 substantial growth simply because currently
3 the market is so immature and disorganized.

4 Q Professor, one more question on
5 this revenue issue then. Again without
6 getting specific, did you have the opportunity
7 to compare the various supplements you had on
8 this chart with figures that were produced in
9 discovery?

10 A Yes. So it was very useful to be
11 able to do discovery and see what the
12 webcasters themselves are saying, although I
13 have to say it was very disorganized what they
14 presented. But we could get the sense of the
15 general numbers here and the key thing is the
16 bottom line. If you look at the overall
17 revenue for a large successful webcasters,
18 they actually earned more in revenue than we
19 were projecting and they have faster growth
20 rate than what I estimated.

21 But it's important to note that
22 not every number here was the same as every

1 number that we saw in discovery. For
2 instance, they earned far more than we
3 expected in display advertising and channel
4 sponsorship also did very well. But some of
5 the big webcasters made a choice to offer zero
6 video gateways. These are virtually sold out
7 in the industry, but some large webcasters
8 just had the decision they're not going to
9 offer them at all.

10 That by itself, one video gateway
11 could pay for an hour of webcasting. They
12 chose not to do that perhaps because they
13 wanted to build market share and didn't want
14 to discourage people from using their service
15 and the radio spots also we saw a lot of
16 bouncing around. In many cases, those numbers
17 were lower than what we projected.

18 But despite these choices that the
19 webcasters made, the overall bottom line was
20 actually that a large webcaster would earn
21 more revenue than what we projected albeit in
22 somewhat different ways and in particular,

1 there's a lot of discretion about how much
2 inventory you say you have and how much you
3 sold out. For instance, you could have five
4 spots and sell 28 percent or you could say we
5 have two and a half spots and have twice as
6 high a sell rate. So you can have some
7 discretion on how you state your inventory and
8 your sell-through rate.

9 So as a consequence, these
10 specific numbers move around a lot when you
11 look at the different webcasters. But the
12 bottom line number is corroborated by
13 discovery.

14 MR. SMITH: Your Honor, I'm about
15 to move to a different topic. This might be
16 an appropriate time for a break.

17 CHIEF JUDGE SLEDGE: Thank you
18 sir. Dr. Brynjolfsson, your comments about
19 automobile advertising resonates by wife
20 bought a compact car this weekend and in the
21 big stack of documents they gave her was one
22 called Privacy Notice and expecting something

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1 like a HIPAA, we weren't surprised by that and
2 she started to sign it and I just kind of
3 noticed that in the language of the "Privacy
4 Notice" it said "We will disclose your
5 information to anyone and everyone we wish."
6 We'll recess ten minutes.

7 MR. HANDZO: Your Honor. I'm
8 sorry. If I can just raise one housekeeping
9 matter I should have raise this morning. RLI
10 filed a motion to which our response is due
11 tomorrow. We filed a motion for extension. I
12 think that has now been consented to.

13 CHIEF JUDGE SLEDGE: Yes.

14 MR. HANDZO: It has been. For the
15 sake of keeping one of my partners in the room
16 instead of going back to have to start writing
17 the response, I just wanted to raise that
18 issue with the Court to just determine if we
19 could get a decision on that motion for an
20 extension before we break today.

21 CHIEF JUDGE SLEDGE: I doubt if
22 we'll have all those documents for a couple

1 days. It takes usually two days for us to get
2 anything that's filed. So I don't know that
3 we'll be able to respond in any time soon.

4 MR. HANDZO: Perhaps if we could -
5 -

6 JUDGE ROBERTS: How long was your
7 extension request for?

8 MR. HANDZO: I think we were
9 asking for a week and then I believe RLI
10 wanted a corresponding week for their reply.
11 We can bring --

12 CHIEF JUDGE SLEDGE: All I can
13 tell you is the environment in which we're
14 operating and I don't know if we can
15 accommodate your request.

16 MR. HANDZO: Perhaps if it would
17 help the Court, we can just bring copies of
18 the motion papers to Court over the lunch
19 break.

20 JUDGE WISNIEWSKI: Is this an
21 unopposed motion?

22 MR. HANDZO: Yes, it is an

1 unopposed motion.

2 CHIEF JUDGE SLEDGE: I suggest you
3 do that.

4 MR. HANDZO: Thank you.

5 CHIEF JUDGE SLEDGE: Off the
6 record.

7 (Whereupon, the foregoing matter
8 went off the record at 10:09 a.m. and went
9 back on the record at 10:22 a.m.)

10 CHIEF JUDGE SLEDGE: On the
11 record.

12 MR. SMITH: May I proceed, Your
13 Honor?

14 CHIEF JUDGE SLEDGE: Please.

15 DIRECT EXAMINATION (CONT'D)

16 BY MR. SMITH:

17 Q Professor Bryjolfsson, I've put on
18 the easel Table 6 from your written testimony.
19 Can you tell the Board what that represents?

20 A Yes. This is a summary of Model 1
21 which I described to you earlier where what we
22 do is we start with the rate that was set back

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1 in 2001 and we update that to see how the
2 revenue has changed since then, how the cost
3 changed and what would that imply for what a
4 willing buyer and seller would agree to today.

5 Q Now the revenue and cost data that
6 are on here, they came from where?

7 A These are just the same data that
8 I showed you earlier, previously, that cost
9 data and the revenue data. It's the same
10 numbers. We're just going to put them
11 together now.

12 Q Okay. Let me ask you to start
13 with the revenue section at the top of the
14 chart and ask you to explain how you combined
15 the various revenue estimates together.

16 A Right. So here are the
17 advertising revenues that we showed you
18 earlier and the subscription that I showed you
19 earlier for 2005 and we're doing is we're
20 comparing those to what they were back in 2000
21 and 2002. Back then, there were no
22 subscription services. So there were no

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1 revenues being earned there and there were few
2 companies that did webcasting and earned
3 advertising revenues. We picked the one. We
4 looked at all of them. We picked the one that
5 had the highest advertising revenues that we
6 could find. Can I say the name of the
7 company?

8 Q It doesn't matter. Yes.

9 A NetRadio. And so we picked the
10 one that had the highest and the reason we
11 picked the highest one was to be conservative.
12 We wanted to see how things had changed, how
13 things had improved and by picking as high as
14 possible baseline, it gave us less scope for
15 improvement. So that was conservative.

16 So they actually had higher
17 revenues than this, but we subtracted an
18 estimate of their marketing and sales costs
19 right off the top here and brought it down to
20 about 2.3 cents per listener hour that they
21 were earning back in 2001. So you can compare
22 that to the 2.66 cents that the companies are

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1 earning today and that means that there's been
2 36/100ths of a cent improvement in advertising
3 revenues if you use that comparison.

4 Q Okay, and then --

5 A For subscriptions -0

6 Q I didn't hear the next, the last
7 part.

8 A For subscriptions, it's obviously
9 increased as this is the entire amount. So
10 you can compare 7.49 to zero.

11 Q Now then how did you go about
12 combining the subscription and advertising
13 revenue estimated together?

14 A Well, so the subscription
15 webcasters also had advertising services that
16 they were operating together. They
17 coordinated and they shared the cost. For
18 instance, the large companies are doing this.
19 I won't say their names I guess. So we
20 looked at a base case where 80 percent of the
21 revenues came from advertising and 20 percent
22 came from subscription services.

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1 Because subscription services are
2 more lucrative, that translates into about
3 91.8 percent of the hours being advertising
4 versus 8.2 percent being from subscription
5 services and then we just did a weighted
6 average of the two. You take how much you
7 earn from your advertising business and how
8 much you earn from your subscription and you
9 add them together. Take a weighted average
10 based on how many hours are spent in each of
11 them and that gives you the weighted average
12 number of revenue you get per hour and it
13 turns out to be 2.89 cents per hour that they
14 are getting in revenue.

15 Q Okay. And then you compared that
16 to 2001?

17 A Right. So if you subtract also
18 the PRO royalties, the royalties for performer
19 rights organizations like ASCAP, BMI, SESAC
20 and once you subtracted that, you can compare
21 these numbers and you make them comparable and
22 see that there's been about 7/10ths of a cent

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1 improvement on the revenue side.

2 Q Okay, and then what did you do on
3 the cost side?

4 A So the same exercise on the cost
5 side. We looked at what the costs were,
6 starting with the fixed costs, what the costs
7 were in 2001. You may recall that the fixed
8 costs per listener hour were about 2/10ths of
9 a cent.

10 Q Are you looking at 2001?

11 A Sorry. The costs in 2005 were
12 2/10ths of a cent. In 2001, they were little
13 less than half of a cent. So there's been
14 improvement of 27/100ths of a cent as the
15 fixed costs have come down to mention the cost
16 of the equipment has been falling.

17 And you could do the same thing
18 for bandwidth. You may recall that bandwidth
19 costs dropped from 2.5 cents per listener hour
20 to about 5/10ths of a cent per listener hour.

21 For the advertising model, we
22 assumed a higher cost of bandwidth for

1 subscription model because they had higher bit
2 rate. They're delivering a higher quality
3 service. Take a weighted average of them.
4 Overall, there's been about just under a two
5 cent per hour improvement in the cost because
6 bandwidth has gotten much cheaper.

7 Q Okay. Now having established
8 those changes in costs and revenues, under
9 Model 1, how did you go about then producing
10 one estimate of royalty rate?

11 A So what we need to do is
12 understand how has the surplus changed since
13 2001. As we see, the revenues have gone up
14 somewhat. The costs have down. So assuming
15 the 2001 base case, we can see that the
16 economic circumstances have improved in this
17 industry and in particular, if you add up the
18 improvement in revenue and the improvements in
19 the cost side, you get a total improvement of
20 about 2.94 cents per listener hour, just under
21 three cents per listener hour.

22 So if they did the same thing

1 today as they did back then in terms of
2 running an operation, each listener hour, they
3 would have 2.94 cents more of economic value
4 created. It's worth highlighting though
5 what's important and what's less important
6 here. Much of this comes from just
7 improvements in bandwidth. The costs of that
8 have fallen quite precipitously. It's well
9 document. So they just don't have to pay as
10 much to deliver that and that alone accounts
11 for almost two cents of improvement in their
12 economic position. So that gives you the
13 total increase in surplus since 2001.

14 Q Okay and then per listener hour,
15 did you then have to divide the surplus as you
16 talked about before?

17 A Yes.

18 Q What figure did you use to divide
19 the surplus between the webcasters and the
20 sounding recording companies?

21 A The pot has grown that much bigger
22 since then. Good news. And you would expect

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1 in a free market both the buyer and seller
2 would participate in that and the way that
3 they would divide that up is a function of
4 their relative bargaining power.

5 As I mentioned, the bargaining
6 power of the record companies is much greater.
7 They have a valuable asset that is essential
8 to this operation. The bargaining power of
9 the webcasters is not as great because it's
10 easy to -- There's free entry in the
11 webcasting industry virtually. So that
12 suggests that the record companies are going
13 to get the vast majority of the increase in
14 surplus.

15 There's no way to be exactly
16 precise about how much, what that share will
17 be. It's probably less than 100 percent.
18 It's clearly more than 50 percent given that
19 they have more than half the bargaining power.
20 I chose 75 percent as a reasonable but
21 conservative estimate of how much of the share
22 they would get reflecting their greater

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1 bargaining power.

2 So if you look at the total
3 surplus and you allocate 75 percent of it to
4 the record companies and 25 percent to the
5 webcasters, that implies that you give that
6 much of the surplus to the webcasters. Add
7 that to what their previous rate was and you
8 see that the new rate would be 3.37 cents.

9 Q Per listener hour?

10 A Per listener hour, exactly. You
11 take the old rate and we divide up the
12 increase in surplus between the parties and it
13 leaves the record companies with 3.3 cents per
14 listener hour in terms of royalty and the
15 webcasters with the remainder.

16 Q Let me ask you, Professor. If you
17 were to do an exercise that assumed contrary to
18 your testimony that the bargaining power was
19 equal between the record companies and the
20 webcasters, what kind of an increase in
21 royalty rate for 2005 would be recommending
22 using this methodology?

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1 A Well, the evidence is very clear
2 that the record companies have more bargaining
3 power, but as a hypothetical one could
4 imagine, suppose they had equal bargaining
5 power. The way I constructed the model makes
6 it very easy to see what the implications
7 would be. So you could take the extreme
8 assumption that the webcasters and the record
9 companies had exactly the same bargaining
10 power. They just divided things 50/50. Then
11 you would multiply the increase in surplus by
12 50 percent going to the record companies. So
13 just under three cents, that would be about
14 1.5 cents of value going to the record
15 companies. Add that to the original rate. So
16 the total would be about 2.6 or 2.7 cents
17 would be the new rate. So if you just made
18 the extreme assumption that there was no
19 greater bargaining power by the record
20 companies, it would still imply a royalty rate
21 that was about 2.6 or 2.7 cents.

22 Of course, you could do the

1 opposite. You make the extreme assumption
2 that the record companies had all the
3 bargaining power.

4 Q How would that come out?

5 A And then if you added all of that
6 and you received the whole amount of 2.9 to
7 1.17 and that would imply a royalty rate of
8 over four cents per listener hours. That kind
9 of gives you a sense of the two most extreme
10 cases of what it would be, somewhere between
11 2.7 and four cents per listener hour and we
12 used the midpoint.

13 Q Now if you could have a seat for a
14 minute. Then, Professor, just to summarize,
15 what did you conclude based on your Model 1?

16 A So based on Model 1, we concluded
17 that the willing buyer and willing seller in
18 this market would agree to a royalty rate of
19 3.37 cents per listener hour. That's a
20 substantial increase from what it was back in
21 2001. You can convert that listening hour
22 rate to a rate per performance simply by

1 dividing by 15.36 and that's what this row in
2 the table does.

3 Q Now let's figure a 3.37 cent per
4 listener hour. That's a figure for last year.
5 Right?

6 A Yes. Actually it is.

7 Q So what are you recommending for
8 the years that are covered by the new rate?

9 A Well, we're going to do exactly a
10 parallel analysis. I won't walk you through
11 all the details, but in future years, as I
12 mentioned, we know that the cost of bandwidth
13 is going to go down. There will be
14 improvements in advertising. We can project
15 very small inflation based increase in
16 subscription. When you combine all of those
17 effects together, you get an implied royalty
18 rate of 4.37 cents in 2006 rising to 7.64
19 cents of royalty in 2010. And I've also
20 showed the corresponding rates for
21 performance.

22 Q Professor, I think we're ready to

1 move on to Model 2.

2 A Okay.

3 Q Now just refresh our recollection.

4 What is Model 2?

5 A So with Model 1, we started with
6 the assumption that we had the right rate back
7 in 2001. All we're doing is updating it based
8 on how things have changed. With Model 2, we
9 just start fresh and we look at the total
10 revenues, the total costs and allocate those
11 according to, the surplus generated according
12 to the bargaining power.

13 Q Did you use the same cost and
14 revenue data?

15 A Exactly the same cost and revenue
16 data.

17 Q And so what did you do differently
18 essentially?

19 A Well, we didn't look at that
20 baseline. We just looked at adding up the
21 total revenues, what the total surplus you
22 could have today and then divided that between

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1 the two parties.

2 Q And just as a general matter, what
3 conclusions did you draw from that exercise?

4 A Interestingly it came out with
5 very similar numbers. We came out with again
6 a recommendation that there should be a
7 substantial increase in the royalty rate that
8 a willing buyer and willing seller would see
9 that there's a great deal of surplus being
10 generated. They would bargain over that and
11 you would have a much higher royalty rate
12 today than you would back in 2001 and
13 furthermore, that would increase through 2010
14 as the surplus continued to increase.

15 Q I just put Table 8 from your
16 written testimony up on the board and I
17 wondered, Professor, if you could tell us what
18 this represents.

19 A So this is the advertising model
20 and what we've done here is just calculated
21 the total surplus that have been created from
22 advertising and subtracted from that all of

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1 the various cost elements and as you can see,
2 an advertiser would earn as I mentioned
3 earlier about 3.3 cents per listener hour and
4 in discovery, we found out that it may be a
5 little low, but that's the number we estimated
6 in October.

7 Their costs were as described
8 here. Again, discovery suggested we may have
9 been conservative there. But ultimately if
10 you subtract these costs from these revenues,
11 you get a surplus value of 1.81 cents per
12 listener hour. That's how much value it was
13 in 2005. That number increases substantially
14 over time in the advertising market. As I
15 mentioned, advertising is maturing and
16 becoming a much more lucrative vehicle on the
17 internet.

18 Q And for 2006, what does, just for
19 advertising, your model show is an appropriate
20 rate?

21 A If there were -- If all the
22 webcasters only make money through

1 advertising, this would imply that there would
2 be a statutory royalty rate per listener hour
3 of 2.3 cents for 2006 rising to 5.9 cents.

4 Q And what would be the performance
5 rates?

6 A So you could look at the
7 corresponding for per performance rates. I've
8 just divided this number by 15.36 and you see
9 that it would be about 15/100th of a cent in
10 2006 rising to 38/100th of a cent in 2010/

11 Q Now did you do the same essential
12 exercise with subscriptions?

13 A Yes. Very straightforward. Same
14 analysis. We just looked at the revenues and
15 subtracted the costs to see what the surplus
16 was. The revenues that I mentioned earlier
17 are over eight cents per listener hour. Just
18 look at what they charge per month and divide
19 it by the number of hours. The cost we've
20 gone through.

21 When you subtract that, this is a
22 very high margin, very lucrative business.

1 You can see it very easy. No wonder they're
2 doing so much effort to drive people towards
3 the subscription business. If you visit these
4 sites, they're urging people to use the
5 subscription services. Very high margin.
6 They have a surplus of over five cents per
7 listener hour in 2005 and that grows to over
8 seven cents by the end of the period that
9 they're generating and that surplus would be
10 divided between the willing buyer and the
11 willing seller based on their bargaining
12 power. They couldn't do it without the seller
13 and so therefore the seller would be in a
14 position to capture some of that surplus in a
15 free market and the corresponding rate rises
16 from 4.38 cents to 5.6 cents per listener
17 hour.

18 Q Okay, and then I take it the next
19 step was to combine the two sets of rates,
20 advertising based and subscription based.

21 A Yes.

22 Q And referring to Table 10, can you

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1 tell us how you did that?

2 A Sure. So in practice, the large
3 webcasters have both of these services side by
4 side. They do them together. So what you
5 would want to do is look at the combined
6 revenues that they get per listener hour.
7 What we did was straightforward. You just
8 take a weighted average of the two, the number
9 of hours they have for advertising and the
10 number of hours they have for the subscription
11 service and you take a weighted average of
12 what the surplus is in each of those
13 categories. And that's what we've done on
14 this chart. The weighted average revenues per
15 listener hour rise from 5.3 cents in 2006 to
16 over 10 cents in 2010.

17 Q And so what royalty rates do you
18 come up with under Model 2 when you combine
19 subscription and ad based analysis?

20 A Yes. So as I mentioned, the
21 sellers would capture a share of that surplus
22 and the buyers would capture a share of that

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1 surplus. When we combine the two, weighting
2 them based on proportionately, what we find is
3 that the weighted average royalty rate grows
4 from 2.5 cents, almost 2.6 cents, per hour to
5 5.8 cents per listener hour and that reflects,
6 the increase reflects the improvement in both
7 those, but especially advertising.

8 Now you could weight them in
9 different ways. I mean you could put more
10 weight in advertising or subscription. It's
11 hard to predict into the future exactly how
12 big each of them would be. Fortunately by the
13 end of the period, both of them earn about the
14 same amount per listener hour. Currently the
15 subscription is a very high margin business,
16 but over time, advertising will become better
17 as well.

18 So it doesn't matter too much what
19 weights you use. It's not very sensitive to
20 that. We could have a larger weight on
21 subscriptions or a smaller weight on
22 subscriptions. It wouldn't change the overall

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1 recommendation by more than a few tenths of a
2 cent at most.

3 Q Now is this Table 10 the source of
4 your rate recommendation that we discussed at
5 the outset of your testimony?

6 A Yes, it is.

7 Q And can you show us where the
8 figures on the rate recommendation are that
9 come from the table?

10 A You could be two easels side by
11 side, but let me just briefly show you a line
12 I didn't show you. I did everything in terms
13 of listener hour, but the standard has
14 described things in terms of performance. So
15 we just divided the listener hour by the
16 number -- Performance is 50.36. So that's
17 just that arithmetic there. You can see that
18 this royalty rate is equivalent to 17/100ths
19 of a cent per performance assuming 15.36
20 performances per hour; in 2005, rising to
21 about 38/100ths of a cent.

22 That is the recommendation we have

1 here. It starts at 17/100ths of a cent
2 rising, actually I have it rising to a little
3 less, 37/100ths of a cent. The reason I did
4 that, I just wanted to make each of the steps
5 a nice round number, 5/100ths of a cent each
6 year. So it kind of smoothed out and I always
7 round off in favor of the webcasters. So we
8 ended up with a slightly lower royalty rate at
9 the end.

10 But this number right here
11 (Indicating) is my best economic estimate, my
12 best conservative economic estimate, of what
13 a willing buyer and willing seller would agree
14 to based on the economics of the changes in
15 the costs and the revenues of the webcasting
16 market.

17 Q Okay. Now, Professor, looking at
18 your recommended rate, Demo 43 here, there's
19 number two in each of the categories involving
20 a surcharge for streams delivered to mobile
21 devices.

22 A Yes.

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1 Q Did you do some economic analysis
2 relating to mobile delivery of streams?

3 A Yes, I did. As I mentioned in the
4 morning, early in the morning, this is
5 becoming a very big opportunity for internet
6 radio. Most of the major cellular providers
7 are giving an opportunity for the subscribers
8 to listen a radio through their wireless
9 devices, through their cell phones and they
10 charge much more than they do for the desk top
11 services and as a consequence, there's a
12 tremendous amount of economic value being
13 created, a big opportunity there and a lot of
14 surplus that's going to need to be divided.

15 The numbers are so much higher than what they
16 are for the traditional desk bound webcasting
17 that I thought it was appropriate to do a
18 distinct model for that.

19 Q What kind of services are you
20 talking about here?

21 A These are webcasting services to
22 mobile devices like cell telephones. So you

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1 could have it in your pocket and just listen
2 to it as you walk around or anywhere.

3 Q Let me put up Table 11 then. Is
4 Table 11 your analysis of the economics of
5 wireless?

6 A Yes, it is.

7 Q And can you explain to us
8 generally what you did here?

9 A Again, it's the same analysis. We
10 looked at the revenues that you could earn.
11 We subtracted the costs and based on that, we
12 calculated what the surplus was and then we
13 just divided it between the two parties.

14 Q And what conclusions did you draw
15 here at least on the chart?

16 A Well, it's very easy to see what
17 the revenues are. The revenues are published
18 per subscriber. You can go, I can go,
19 subscribe to one of these services. There's
20 a small range from \$5 to \$6 or \$7 I think it
21 is. We chose a number towards the middle of
22 the monthly range, sort of towards the lower

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1 end, the lower revenue and in that case, these
2 are revenues per month. Easy to establish.

3 Then we needed to divide those
4 revenues by the number of hours because I
5 calculated everything in terms of listener
6 hour. It's a new market. It's just emerging.
7 It's really just of kind of exploding. So
8 there isn't yet an analyst report that tells
9 us how many hours people will listen to this.

10 Fortunately, there are reports by
11 Arbitron that look at how many times people
12 spend listening to just ordinary radio outside
13 of the home. People who do listen to the
14 radio, how much time they spend listening to
15 the radio outside the home and that is 31
16 hours per month. So I use that number and if
17 you divide the revenues by the number of
18 hours, it gives you the revenue per hour.

19 Q And are there any distinctive
20 elements with respect to the cost analyses
21 here?

22 A Well, yes. The cost is

1 interesting. The bandwidth costs really go
2 away. For the subscriber, in addition to
3 charging subscribers for the music, the
4 services like Sprint and Verizon and so forth,
5 separately charge for the bandwidth. You
6 might have an unlimited package for \$10 a
7 month or something like that just for the
8 bandwidth. So that's already been paid for
9 separately and the bandwidth getting the music
10 screen to the cellular provider just a trunk
11 line with very low cost. So the bandwidth
12 costs really aren't even important in this or
13 are pretty already accounted for. So you
14 don't have those costs.

15 You do have some of the other
16 costs. The fixed cost has to be allocated and
17 so forth. But that big chunk of bandwidth
18 isn't an important cost anymore.

19 Q And you did the same kind of
20 calculation of a proposed set of royalty rates
21 using your 75 percent figure.

22 A Exactly. You just take the

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1 revenues. You subtract the costs. Those are
2 relatively easy to establish and that gives
3 you the surplus and then we have to divide
4 that surplus. Both parties are going to
5 benefit from this. The webcasters are going
6 to benefit. The recording/record labels are
7 going to benefit and the Division of Labor
8 that I used I think that is a fair division.
9 It's 75 percent for the record companies for
10 the surplus and that gives you these
11 corresponding rates.

12 Q Okay. Now, Professor, we noticed
13 in your rate recommendation you don't
14 actually take those mobile rates and turn them
15 into a specific numeric recommendation for a
16 rate for mobile services. Can you tell us why
17 not?

18 A Yes. First off, it's not because
19 I don't think they're important. I think this
20 is extremely important and may well come to
21 dominate internet radio is these mobile
22 devices. Arguably, already today there are

1 more people who access the internet through
2 mobile device than through desk top services
3 and that's only going to become more pervasive
4 in the coming years.

5 But literally as I was putting my
6 report together, these services were just
7 coming out and emerging and it's a little
8 early to make a definitive recommendation. If
9 I were to make one, I would use these numbers
10 that are calculate right here (Indicating).
11 The thing that I can say with great confidence
12 is that this is an extremely valuable service
13 that creates a great deal of surplus and the
14 rate would be much higher than it would be for
15 the traditional desk top services and that a
16 willing buyer and a willing seller would
17 certainly take that into account.

18 Furthermore, this is also a
19 service that although we haven't talked much
20 about the cost side for the record companies,
21 this is a service that could potentially be a
22 very strong substitute for things like an iPod

1 and downloaded music or a Walkman. So it
2 could really cannibalize the other revenue
3 streams of the record companies. That would
4 also lead to a higher rate.

5 Q That's a nice segue then,
6 Professor, to the issue of what other factors
7 would affect the negotiations here in terms of
8 costs and benefits to the two sides here in
9 the negotiation.

10 A Okay.

11 Q Did you consider some other
12 factors?

13 A Yes, we did. I built this cost
14 and revenue model to focus on fairly narrowly
15 the costs and revenues, just the direct things
16 you could measure at the webcasters. But in
17 practice, there are a lot of indirect benefits
18 and costs that a willing buyer and willing
19 seller might also take or would also take into
20 account.

21 Q Can you tell us what those are?

22 A Well, you can think of them

1 conceptually in four categories. For the
2 webcasters, there's indirect benefits and
3 indirect costs and similarly for the record
4 labels there's indirect benefits and indirect
5 costs and we could think about what those
6 would be in each of those categories and how
7 important they would be.

8 Q Why don't you tell us which ones
9 you consider to be for those categories?

10 A So let's start with the indirect
11 benefits for the webcasters. When they have
12 a service that provides internet radio, that
13 brings a lot of traffic to their website and
14 that could be very valuable to the websites.
15 It can have benefits in terms of, for
16 instance, additional banner ads shown on the
17 home page. If you go to Yahoo, for instance,
18 you'll see banner ads on their home page that
19 aren't counted as part of their music service
20 but people who visit Yahoo Music often go
21 through their home page. So there are
22 revenues generated there.

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1 It's part of their counter
2 strategy to make their users more "sticky"
3 they call them, to get them to be more loyal
4 to the website to provide these services. The
5 subscription services like AOL also say that
6 this is an important tool for providing
7 stickiness and retention and more traffic to
8 their websites. Even some of their other
9 services like the instant messaging products,
10 if you include music bundled with the messaging
11 products, that can make the instant messaging
12 a more attractive product compared to the
13 competitor's products. So you get benefits
14 from that.

15 And even on over-the-air radio,
16 the Brian Parsons, maybe I should have
17 checked, has said that this is an important
18 tool for generating improving the performance
19 of the over-the-air radio stations. So
20 clearly, the webcasters of all types see
21 internet radio as a critical tool for other
22 parts of their businesses, generating revenue

1 in other parts of their businesses, none of
2 which is counted as small.

3 Q Okay. How about indirect benefits
4 to the sound recording companies from
5 webcasting?

6 A Right. Similarly, the sound
7 recording companies could have indirect
8 benefits. Here the evidence is really very
9 mixed. The possibility would be that somebody
10 would listen to the song on the, over internet
11 radio that that could generate revenues
12 through some other source like getting them to
13 buy a CD or something like that.

14 But I'm not aware of any research
15 that shows that this is actually happening for
16 internet radio that that has been important.
17 The closest thing Professor Stan Liebowitz did
18 a detailed review of the literature on this
19 topic and he concluded over all it was mixed
20 but probably unbalanced. Internet music was
21 a substitute that hurt sales through other
22 channels. I've been to academic conferences

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1 where that seemed to be the consensus as well.

2 Similarly, David Blackburn did a
3 dissertation on the effect of internet music
4 whether it might be promotional and he
5 concluded that on balance it probably hurt
6 sales through other channels although he did
7 identify that there may be certain types of
8 artists who would benefit significantly
9 especially brand new artists who needed to get
10 the reputation. So smaller artists might
11 benefit. A more established artist, he
12 estimated his model using his data which he
13 would hurt and the overall effect would be
14 negative.

15 But just as important what the
16 overall effect is, I think even more important
17 actually is the fact that there's a great deal
18 of heterogeneity. Some artists may be helped.
19 Other artists might be hurt. Any sort of
20 blanket consideration would inevitably be
21 wrong for most of the artists.

22 Q I take it there's cost then. The

1 flip side of the promotion benefit is
2 substitution.

3 A Yes. I mean there's much stronger
4 evidence of cost to the record labels. What
5 are those costs? Well, it's not the direct
6 costs of providing the service. It's the
7 opportunity costs of losing sales in other
8 channels. These numbers I'm describing are
9 very small per performance compared to the
10 money that they earn on CDs or digital
11 downloads. When they sell a song to iTunes or
12 WalMart's digital downloads, they earn 70
13 cents or so for that song. So even a small
14 amount of substitution can be very damaging to
15 the revenues in other areas because of the
16 high margins in the other areas.

17 And the evidence is that the
18 substitution might be quite significant. Just
19 spending more time listening to music in one
20 channel by definition leaves fewer hours
21 available to listen in other channels. So
22 there's that kind of indirect substitution.

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1 Unfortunately, there's also
2 another very direct kind of substitution that
3 I think is going to become increasingly
4 important and that's just the piracy or
5 stream-ripping of internet radio. There are
6 large number of sites and tools that
7 facilitate the ripping of music from internet
8 radio and that means capturing the bit stream
9 and allowing the consumer to store it on their
10 hard disk as said individual songs. For
11 instance --

12 Q Do you have some experience in
13 that area?

14 A Yes. So I went ahead and tried
15 this. I visited some of the sites and they
16 said it's trivially easy to do this. I wanted
17 to see if that was marketing puffery or if it
18 really is trivially easy to do this. So I
19 downloaded one of the tools. It was free and
20 indeed it was trivially easy. I turned it on.
21 I started listening to an internet radio
22 station. I actually listened to it at the

1 time with this tool, rip two of them and the
2 music just was recorded right onto my hard
3 disk.

4 I left it running overnight and I
5 had a whole bunch of songs on my hard disk and
6 I just have continued to test this. I have
7 over 1,000 songs on my hard disk that I have
8 just recorded from radio stations. They are
9 all categorized by the artist name and title.
10 They are all very neatly organized. I can mix
11 and match. I can import them into iTunes. I
12 can select all the ones by the Beatles or the
13 Rolling Stones. I can bring them onto my
14 iPod. I can drive in my car. I don't have to
15 listen to radio. I don't have to listen to
16 buy those anymore because now I have 1,000 of
17 them on my iPod from this free tool that is
18 one of these stream ripping tools.

19 Q Now just to complete the pictures,
20 there's a fourth quadrant which was indirect
21 cost to the webcaster. Is there anything to
22 take into account in that quadrant?

1 A Right. So we've talked about the
2 benefits to the webcasters and we talked about
3 the potential benefits which is not much
4 evidence for the radio record label. We've
5 talked about the costs to the record labels.
6 The last thing we can talk about is the
7 potential costs to the webcasters, indirect
8 costs.

9 It's hard for me to think of
10 anything in that category. I don't think
11 there really is any important indirect costs.
12 I guess in theory if you listen to internet
13 radio you might buy less of some of their
14 other services, but all the evidence is
15 actually they use it to drive a pathway to the
16 other services.

17 Q Now did you take into account
18 these indirect costs and benefits in the
19 calculation of your proposals here?

20 A So in Model 2, we actually did
21 not. In Model 2, we just counted the revenues
22 and costs that I showed you and so those

1 indirect costs and benefits don't show up
2 anywhere. So implicitly, we're assuming they
3 don't exist. If we did include them, it would
4 I think lead to a higher rate because of the
5 benefit to the webcasters and costs to the
6 record labels.

7 In Model 1, we did implicitly
8 include some level of indirect costs and
9 benefits.

10 Q Can you explain that?

11 A Yes. Well, the idea of Model 1 as
12 you recall is we started with what a willing
13 buyer and seller would agree with to in 2001
14 as established in the previous proceedings.
15 If that number was accurate, then a willing
16 buyer and seller would have taken into account
17 not only the direct costs and benefits, but if
18 they were rational they would also include the
19 indirect costs and benefits. So in principle,
20 that rate that was set in 2001 based on
21 agreements that were made would have accounted
22 for both the indirect costs and benefits and

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1 the direct costs and benefits.

2 Now when we updated that for 2005,
3 we looked at how the direct costs and benefits
4 have changed. But we didn't do anything to
5 update the indirect costs and benefits. So if
6 they were the same in 2005 as they were back
7 in 2001, then we carried them along. So in
8 that sense, Model 1 does implicitly include an
9 update for the indirect costs and benefits.

10 Q Now you mentioned that there's
11 evidence that there may be some promotional
12 effects for some categories of artists.

13 A Yes.

14 Q What in your opinion would be the
15 appropriate way for that effect to be taken
16 into account in the transactions between the
17 webcasters and the sound recording companies?

18 A Well, David Blackburn's
19 dissertation was very interesting. It was
20 done at Harvard and he did a very careful
21 detailed econometric analysis of this and one
22 of the nice things about his analysis is it

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1 showed how different artists might be affected
2 by downloading, by internet music and not
3 necessarily radio stations. Let me just
4 clarify.

5 There was a tremendous difference
6 between the different types of artists. Some
7 he estimated would benefit. Others would be
8 damaged tremendously. So if you just sort of
9 set a blanket lowering or raising of the rate
10 to try to account for that, that wouldn't be
11 right for anyone of those artists. In
12 practice, those new artists might prefer to
13 have more promotion, cut special deals with
14 webcasters, whereas the established artists
15 would want to do just the opposite. They
16 would say "Hey, we want to charge even higher
17 rates because you're cannibalizing what we're
18 doing." So any kind of a blanket treatment is
19 going to be wrong.

20 Fortunately, there is plenty of
21 opportunities and plenty of history of
22 promoters creating all sorts of deals for

1 promoting their artists and they usually don't
2 involve simply just giving away music at a
3 lower price. They involve giving away T-
4 shirts and advertising campaigns and
5 appearance on Jay Leno. There's a whole
6 coordinated campaign that typically goes with
7 trying to introduce a new artist and there's
8 a lot of very creative, very sophisticated
9 people who are, I think, probably doing a good
10 job at understanding how to do that. It would
11 seem to be well beyond the scope of a group of
12 us as smart as we are in this room to try to
13 guesstimate what all the right promotions
14 strategies would be with all the different
15 artists especially since they are going to be
16 different for every type of artist.

17 Q Now I want to ask you about a
18 couple of the technological aspects of this
19 that affect these indirect benefits and costs.
20 One, you predicted increasing bit rates on the
21 webcasting services.

22 A Yes.

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1 Q Going into the future. How does
2 that relate to the issue of indirect benefits
3 and costs?

4 A Well you may recall I assumed that
5 the webcasters would broadcast at a higher and
6 higher bit rate. That improves the quality of
7 the music and makes it more of a substitute
8 for other forms of music. For instance, CD
9 quality that you can buy is higher than say AM
10 broadcasts.

11 As the webcasters increase the bit
12 rate it makes their music much more of a
13 substitute for other forms of music whether
14 it's digital downloads like iTunes or CDs. So
15 you could expect that over time it will
16 become, there would be more cannibalization of
17 these other sources and indeed that's what the
18 discovery indicated that these companies have
19 an explicit strategy of cannibalizing CD sales
20 and iTunes with their services.

21 Q Okay. Now on another
22 technological issue is the one that was for

1 Prong 3 in your rate proposal which was a
2 requirement if possible that there be
3 encryption on these services.

4 A Yes.

5 Q Can you explain how that relates
6 to these issues?

7 A Yes. Well, I found that as
8 advertised it was trivially easy to stream rip
9 these services. I encourage you to try it
10 yourself if you want. A lot of people are
11 currently discovering this because if you go
12 to iTunes, you can use the service called the
13 Alexa, see who else is visiting iTunes and
14 what other locations people who visit iTunes
15 are also visiting and a very popular site that
16 people listen to in conjunction with iTunes
17 are sites that provide stream ripping
18 services. So it seems to be something that's
19 increasing well known.

20 It would be suicidal for a company
21 to allow unlimited stream ripping of their
22 product. It would eliminate the need for

1 people to buy other products if people can
2 download this way. It's something that's
3 recognized by the record companies and also
4 recognized by the webcasters and even
5 ironically, webcasting itself would be
6 jeopardized once people had downloaded all the
7 songs that they wanted to to the hard disk.

8 So any willing buyer and seller in
9 my judgment would surely want to have some
10 kind of encryption included. Now that doesn't
11 mean it's going to be perfect and it's going
12 to eliminate all stream ripping. But I think
13 you could dramatically reduce the casual
14 ripping of radio by having some kind of
15 encryption tool to the extent that's feasible
16 and not too burdensome.

17 Q Now have you in your work on this
18 case had opportunity to visit a number of the
19 internet radio webcaster sites?

20 A Yes.

21 Q To see what offerings they had
22 there?

1 A Yeah.

2 Q Can you comment on a variety of
3 stations you found there?

4 A One of the things that's wonderful
5 about the internet is that there's so much
6 choice out there and we've all experienced the
7 great almost limitless variety of services
8 that are being offered and that's certainly
9 true for internet radio. There's a lot of
10 customized channels, some that focus just on
11 the music from 1965, the British invasion and
12 Irish folk, virtually any small niche,
13 category of taste that you have you can find
14 a station that specializes in that.

15 Furthermore, there are tools that
16 allow you to find music that may be of
17 interest to you whether it's a particular
18 artist that you're looking for or a genre or
19 the most interesting thing lately are some of
20 these tools that you kind of learn as you
21 listen and you tell them what you like and you
22 don't like.

1 As a consequence internet radio is
2 very different than over-the-air broadcasts in
3 terms of its value proposition. Having a
4 stream of music that's very focused on my
5 personal tastes makes it much more of a
6 substitute for my own CD collection buying
7 things from iPod if I can find the same thing
8 for free through one of these focus channels.

9 MR. SMITH: Your Honor, at this
10 point I was going to turn to his amended
11 testimony that is a discussion of the facts
12 and figures learned in discovery and
13 essentially everything we're going to discuss
14 is restricted under the Protective Order and
15 so I would make a motion at this point to have
16 the next portion of his testimony which is
17 effectively the last portion be subject, be
18 restricted under the Protective Order and that
19 we ask people who are not appropriate for the
20 courtroom under those circumstances to leave
21 the room as well.

22 CHIEF JUDGE SLEDGE: And what

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1 exhibits are you referring to?

2 MR. SMITH: Your Honor, it's his
3 amended testimony which has a couple of
4 different tables I want to show out of it, one
5 of which is AccuRadio pro forma.

6 CHIEF JUDGE SLEDGE: If you want
7 to restrict the public, you'll be very
8 specific with your exhibits.

9 MR. SMITH: Well, actually there's
10 a number of questions that I intend to ask him
11 that aren't about particular exhibits, what he
12 learned from reviewing the documents. He
13 testified generally about corroboration from
14 discovery about the figures and I just want to
15 be able to ask him to give examples of the
16 corroboration. Some of it is exhibits, but we
17 did have a written amended testimony which the
18 Board allowed to be filed which is all
19 restricted and it's just this portion of his
20 testimony that I want to have him summarize
21 that piece of it.

22 CHIEF JUDGE SLEDGE: That's the

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1 very point. It's all restricted so the people
2 that may want to object to this motion you're
3 making need to be given the most information
4 that you can give them as to what you're going
5 to be asking about.

6 MR. SMITH: It's cost and
7 revenues of various webcasters. I can give
8 you specific names and they will be Yahoo.
9 They will be AOL. They will be AccuRadio.
10 Those are the primary ones and Live365. Those
11 are the ones that I'm aware of are specific
12 examples that we'll be giving about their
13 costs currently, their revenues currently and
14 their projections of the future as all stated
15 in his amended testimony.

16 CHIEF JUDGE SLEDGE: Any objection
17 to the motion to move the next portion of the
18 testimony to be pursuant to the Protective
19 Order?

20 MR. STEINTHAL: No objection, Your
21 Honor. Kenneth Steintal for DiMA.

22 CHIEF JUDGE SLEDGE: Hearing no

1 objection, then the motion is granted.

2 MS. LEARY: Your Honor, could we
3 inquire about the approximate length of time
4 for the protected session?

5 CHIEF JUDGE SLEDGE: You'll be
6 notified when the Protective Order is
7 finished. That's all the information I have.

8 (Whereupon, the foregoing matter
9 went off the record at 12:06 p.m. for a closed
10 session and went back on the record at 12:17
11 p.m., continuing the open session.)
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1 CHIEF JUDGE SLEDGE: On the
2 record.

3 BY MR. SMITH:

4 Q Professor Brynjolfsson, at this
5 point I'd ask you to summary for the benefit
6 of the Board your overall conclusions about
7 how they should handle the issues that are
8 before the Board now.

9 A Sure. Well, the webcasting
10 industry with a very bright future and I think
11 that that's well understood by anyone who has
12 been looking at this industry. The webcasters
13 themselves have made numerous statements
14 provided in my amended testimony about their
15 confidence.

16 We see some of their financial
17 projections. It's an industry that has
18 improved tremendously since the last hearing.
19 I don't think there's any reasonable doubt
20 that the costs have come down dramatically.
21 It's easy to establish that. The revenues
22 have increased and are projected to increase

1 substantially. Overall, the total surplus is
2 clearly greater now than it was in 2001 and
3 will be greater still in 2010. I've made some
4 conservative but I think reliable estimates of
5 what that improvement in surplus is going to
6 be.

7 The way a market will work is that
8 a willing buyer and willing seller when they
9 come together will bargain over that surplus.
10 Based on my estimates and my assessment that
11 the record companies have more bargaining
12 power than the webcasters, I attribute a
13 majority of the surplus to them and that
14 indicates that a marketplace between these
15 buyers and these sellers would lead to set of
16 rates that was substantially higher than the
17 current rates and would grow through the year
18 2010.

19 MR. SMITH: All right. I have no
20 further questions at this time, Your Honor.

21 CHIEF JUDGE SLEDGE: Approaching
22 our expected midday break of 12:30 p.m., this

1 would be a good time to recess. During the
2 recess, I notice in our first session this
3 morning that some delivery person has
4 appropriated a number of chairs in the back of
5 the room and whoever's responsible for that
6 delivery person I hope they will liberate
7 those chairs during the break.

8 And then are there any pleadings
9 that were going to be presented to us for
10 consideration?

11 MR. HANDZO: Yes Your Honor. For
12 the record, David Handzo. These are the RLI
13 motion papers. I have three copies of those.
14 Also three copies of our motion for an
15 extension to have time to respond to that and
16 then we also filed a notice indicating that we
17 had gotten RLI's consent to the motion of an
18 exception.

19 CHIEF JUDGE SLEDGE: Thank you.
20 We'll be in recess until 2:00 p.m. Off the
21 record.

22 (Whereupon, at 12:20 p.m., the

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1 above-entitled matter recessed to reconvene at
2 2:03 p.m. the same day.)

3 CHIEF JUDGE SLEDGE: On the
4 record. Thank you. We'll come to order.

5 MR. HANDZO: Give a moment, Your
6 Honor.

7 CHIEF JUDGE SLEDGE: Mr. Handzo,
8 on the review of the pleadings you handed to
9 us at the beginning of the lunch break, when
10 we receive those pleadings and if we haven't
11 forgotten and if we don't change our mind, we
12 will grant that motion.

13 MR. HANDZO: Thank you, Your
14 Honor.

15 CHIEF JUDGE SLEDGE: Mr.
16 Steinthal.

17 MR. STEINTHAL: Thank you, Your
18 Honor.

19 CROSS EXAMINATION

20 BY MR. STEINTHAL:

21 Q Good afternoon, Professor
22 Brynjolfsson.

1 A Good afternoon.

2 Q I represent DiMA and AOL, Yahoo,
3 Microsoft, the commercial webcasters as
4 they're occasionally called in this case.
5 Okay.

6 A Okay.

7 Q We have not met before, have we?

8 A Not to my recollection.

9 Q Now I want to ask you some
10 questions about your background.

11 A Sure.

12 Q Prior to this engagement, did you
13 have any experience in analyzing or counseling
14 in the area of webcasting?

15 A I have analyzed the internet
16 industry quite extensively, but I've not
17 analyzed webcasting specifically.

18 Q I understand you have expertise
19 and you've taught in the area of the internet
20 generally.

21 A That's correct.

22 Q As to webcasting, never anything

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1 before this. Right?

2 A That's correct.

3 Q What about over-the-air radio?

4 Any experience whatsoever in counseling or
5 analyzing the radio market prior to this
6 engagement?

7 A Not in detail.

8 Q You say "not in detail." Not in
9 connection with any assignment or teaching.
10 Correct?

11 A No, that's not correct. When we
12 discuss cases at MIT when I teach MBA cases,
13 certainly we frequently discuss over-the-air
14 radio and for that matter webcasting in the
15 course of teaching those courses. For
16 instance, recently I'm just in the middle of
17 teaching a Ph.D. seminar and we devoted a
18 session to the economics of advertising and we
19 looked particularly at, in some depth,
20 broadcast advertising including radio
21 advertising and television advertising and
22 compare that to other ways of earning revenues

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1 for digital products and broadcast products.

2 Q And what analysis, if any, of the
3 advertising market have you done in connection
4 with that course?

5 A I prepare lectures on that.
6 Particularly for instance, I've been working
7 on a research paper to better understand some
8 of the ways that different revenue models
9 affect the types of content that are created
10 and in the course of doing that we had to get
11 into some detail on exactly the understanding
12 of what the effects, the incentives, were for
13 advertising revenue models versus subscription
14 revenue models. I would be happy to describe
15 that in more detail if yo would like.

16 Q That has nothing to do with
17 webcasting. Right? You didn't study
18 advertising models and subscription webcasting
19 advertising prior to this engagement. Right?
20 Just yes or no.

21 A No, that's not correct. It has a
22 tremendous amount to do with webcasting. It's

1 the same set of incentives and economics.
2 What we look for in academia are some general
3 principles that can be applied to multiple
4 different categories so you don't have to
5 start from scratch every time you encounter a
6 new company or a new firm. In the case of
7 webcasting, many of the exact same economics
8 would apply as would apply to over-the-air
9 radio and you could make a very clear analogy
10 between subscription based models on, say,
11 cable television and advertising models that
12 would carry over to other industries that have
13 comparable economics and webcasting.

14 Q Is it your testimony that the same
15 economics apply to the over-the-air
16 broadcasting industry as the webcasting
17 industry? I thought that's what I just heard.

18 A No, that's not what I said. I
19 said there are some principles that you can
20 apply that you can use to learn from one
21 industry for other industries and a good
22 example of that is over-the-air radio or cable

1 television and that's exactly what I've done.

2 Q So it's your testimony, sir, that
3 the costs structure of those industries has
4 anything to do with the cost structure of the
5 webcasting industry.

6 A Yes, it does.

7 Q What are the costs that broadcast
8 radio pays for the performance of sound
9 recording?

10 A Zero.

11 Q And what are the costs that
12 broadcast radio pays for bandwidth?

13 A Zero.

14 Q I gather unless I missed it none
15 of the source materials that you just referred
16 to as being relevant to your courses that
17 touched upon webcasting or over-the-air radio
18 had sufficient relevance to be produced in
19 response to discovery request in this case
20 about your tasks assumed for this case.
21 Right?

22 A Well, I could have produced all of

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1 the readings that we use in my courses. I've
2 been teaching for 15 years and I could have
3 produced all of the articles that I read over
4 those 15 years. I certainly draw on those,
5 but that probably would haven't been as useful
6 as providing the ones that are more focused
7 with the numbers that were used in my report.

8 Q So other than the extent to which
9 you've just testified, you touched upon
10 webcasting and over-the-air radio in your
11 courses materials. You could agree with me,
12 would you not, that you had no prior
13 experience analyzing the webcasting business?

14 A I don't think that's what I said.
15 I think what I said was I taught and I've also
16 written papers on this topic and in the course
17 of writing papers on this topic, that has
18 helped give me insights into the industry.

19 Q Let me ask you to take a look at
20 your deposition in this case, Mr.
21 Brynjolfsson, so we can get a little bit more
22 precise and answer what I thought was a single

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1 question. I'll pass out the entirety of the
2 deposition just so I don't have to come back
3 and forth several times. I would like you to
4 take a look at page six of your deposition and
5 I have the mini-script. It's sometimes
6 different. At the bottom of page six if I can
7 get the question and answer right, starting on
8 line 18.

9 A Yes.

10 Q Question: "Now let's just ask
11 generally about any work you have done at all
12 and if I get a yes answer, we will try to
13 narrow it down. That may shorten this a
14 little bit. Before your engagement to work on
15 this case, have you done any work involving
16 webcasting?" Answer: "Any work involving
17 webcasting? I have done a lot of work on the
18 internet." Question over to page seven: "On
19 the internet generally?" Answer: "On the
20 internet generally but not webcasting in
21 particular." Is that a correct statement
22 under oath when you gave your deposition?

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1 Just yes or no.

2 A I think it's subject to
3 interpretation what the word means -

4 Q Subject to interpretation. Put
5 you gave that answer in your deposition.
6 Right?

7 A Can I finish my -

8 Q Sure.

9 A I think "work involving" is a
10 broad term and I think that my interpretation
11 at the deposition was a very narrow
12 interpretation of involving webcasting. As I
13 just explained, a lot of my work is relevant
14 to understanding the webcasting industry. So
15 depending on how you want to interpret that,
16 you could either interpret it very narrowly or
17 more broadly.

18 Q Well, I'll tell you how I would
19 like to interpret it because we were taking
20 your deposition to find out what, if any,
21 experience you had in this area. Okay,
22 Professor? We asked you the question about

1 what experience you had and you said, "On the
2 internet generally? On the internet generally
3 but not webcasting in particular." So you
4 told us then you had no experience in
5 webcasting in particular at your deposition.
6 Right? Just yes or no.

7 A That is what I said in the
8 deposition.

9 Q Now you then said after the
10 question, "Have you done any work involving
11 the radio industry?" Answer: "No." That's
12 pretty clear. Right?

13 A Actually, no I don't think it is.

14 MR. SMITH: Objection. Your Honor,
15 it's not proper impeachment to ask him if it's
16 pretty clear. Ask him -- The right form for
17 this, "Did you say this or not?"

18 BY MR. STEINTHAL:

19 Q Because that's what you told us at
20 your deposition under oath.

21 A That's correct.

22 Q Then the question next was "Have

1 you done any work involving the recording
2 industry" and the answer was "No." That's the
3 testimony you gave at your deposition. Right?

4 A That's correct.

5 Q Now I believe you mentioned that
6 you consulted in connection with this
7 engagement with the Analysis Group. Is that
8 right?

9 A That's correct.

10 Q What exactly did the Analysis
11 Group do in connection with your engagement
12 here?

13 A We asked them to help identify any
14 documents that might be relevant in the public
15 domain or that could be purchased and I also
16 asked them to sift through a lot of those
17 documents to identify specific costs,
18 revenues, other numbers that would be relevant
19 and bring those to my attention because we
20 wanted to conduct as broad as possible
21 analysis and data gathering as was feasible
22 and although I spent a lot of hours on that,

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1 I wanted to leverage that with a team of
2 multiple people. I think there were four or
3 five people who similarly went out and
4 gathered documents, sifted through them and
5 brought them to my attention and tried to
6 winnow down the ones that would be most
7 relevant. They spent a lot of time doing
8 that.

9 Q Tell me about this winnowing down.
10 Were they ultimately based on a winnowing down
11 of information done by Analysis Group a
12 smaller subset of materials that you actually
13 reviewed in connection with preparing your
14 testimony?

15 A Yes.

16 Q And I'll come back to what the
17 materials were you relied upon for your cost
18 and revenue figures to be sure we spend a bit
19 of time on that. Who with the Analysis Group
20 was your primary contact?

21 A I don't recall his name.

22 Q You don't recall the name of the

1 person who was your primary contact at your
2 support group?

3 A Right.

4 Q I believe at your deposition you
5 testified you also relied on personal
6 contacts with faculty and students. Is that
7 right?

8 A Yes.

9 Q In connection with this
10 engagement, you talked to your students about
11 it and relied on information you got from your
12 students.

13 A I've been thinking a lot about
14 this industry and having discussions about it
15 as part of my regular teaching and
16 researching. I can't help but interact with
17 my students and colleagues when I'm doing my
18 teaching and research much of which helps
19 provide insights into the webcasting industry
20 and the economics of digital more generally.

21 CHIEF JUDGE SLEDGE: Could you
22 speak up a little bit? I didn't get the last

1 half of that answer.

2 THE WITNESS: Sure. My research
3 and teaching focused very much on the
4 economics of digital goods such as webcasting
5 and I've been thinking a lot about this topic
6 and doing research and teaching on it and I
7 can't help but interact with students and
8 discuss topics that are relevant as well as
9 with faculty colleagues on this topic and
10 there's no bright line one can draw between an
11 insight that is narrowly done for this
12 engagement versus part of my general research
13 and teaching in this topic area.

14 BY MR. STEINTHAL:

15 Q I'm sure you can appreciate how
16 difficult it would be for us to cross examine
17 all your faculty and students. So let me ask
18 you this question. Are there any specific
19 facts you relied upon in your interactions
20 with your students or other faculty in
21 connection with this report?

22 A I think they helped give me, my

1 interactions, my background gave me a sense of
2 the overall reasonableness and accuracy of the
3 way I was thinking about the problem, but
4 there are, to my recollection, no specific
5 number or fact that were used in the report.

6 Q Did you review your report or the
7 framework of your report with your students
8 for feedback?

9 A No, I did not.

10 Q Did you review the report or the
11 conclusions that you reached in connection
12 with your report with other faculty members
13 for their feedback?

14 A Well, what I review and what I
15 interact with were the economics of
16 advertising markets and subscription markets
17 and how companies make money in those and what
18 the effects are and those are essentially the
19 same models that are used in this industry.
20 So it helped me feel confident that I was
21 thinking about this industry in the right way
22 because for my analysis I had to understand

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1 what the revenues, relevant revenues, and
2 costs were. So it helped me get a confidence
3 that I was modeling and thinking about this
4 industry correctly.

5 Q Well, I really want to pursue that
6 and pin it down. Just to be clear, you didn't
7 get any feedback from your students as to what
8 the relevant revenues and costs would be for
9 the webcasting market. Right?

10 A I didn't discuss with them any
11 specific numbers. I do in my teaching. We
12 teach very much by the Socratic method and we
13 often interact and talk about different ways
14 companies can make money, what the tradeoffs
15 are, what the various entries are. All of
16 those help me understand how to think about
17 industries like webcasting.

18 Q So did you rely on part on that
19 Socratic method with your students for support
20 for your model here?

21 A Not for specific numbers but for
22 helping me think about this industry and

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1 industries like it.

2 Q Any particular student you want to
3 name as somebody that provided feedback in
4 support of your model?

5 A I could give you the classes for
6 my Ph.D. seminar. It's a very freewheeling
7 discussion there, but we don't have
8 transcripts.

9 Q The same question as to faculty
10 members that you may have aired your study
11 with, would you give the same answers as to
12 the faculty members as you did with respect to
13 the students?

14 A Very similar, yes. We have
15 seminars as well. We have organized faculty
16 seminars as well not just at MIT but I attend
17 them at the National Bureau of Economic
18 Research where people represent topics on
19 things like internet file sharing and so
20 forth.

21 Q Okay. Now what about contacts
22 with representatives of the recording industry

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1 in connection with your report, interviews or
2 otherwise? Is it correct that the only person
3 you talk to in the recording industry about
4 your report was an inside lawyer named Mike
5 Huffy at the RIAA?

6 A That's correct.

7 Q So no interviews of any record
8 company representatives?

9 A That is what I just said.

10 Q And in terms of webcasters, first
11 start out with our group, the Commercial
12 Webcasters, is it correct that you didn't
13 conduct any interviews of the people in the
14 webcasting industry in connection with your
15 report? Correct?

16 A That's correct. Just to be clear,
17 my initial report, obviously my amended report
18 relied a great detail on the discovery, any
19 details of what the webcasters were saying in
20 those documents.

21 Q So you reviewed the webcaster
22 discovery in between the preparation of your

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1 initial report and the submittal report.

2 Correct?

3 A That's correct.

4 Q Other than that, no interviews or
5 analysis of statements by the members of the
6 webcasting industry. Correct?

7 A Well, again it's hard to draw a
8 bright line but for instance, I taught a
9 workshop on pricing of information goods. I
10 think it was in March and we invited in Laura
11 Goldberg who is the COO of Napster which is a
12 large company that provides digital music
13 services and my students and I had a
14 freewheeling discussion with her. I don't
15 think she's one of the -- I understand it
16 Napster is not one of the companies, but it
17 did help me understand the economics of the
18 industry to some extent.

19 MR. STEINTHAL: But her industry
20 at Napster LLC just to be clear, Your Honors,
21 not the original Napster Service that was sued
22 by the recording industry.

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1 BY MR. STEINTHAL:

2 Q But I assume you're referring to
3 Napster LLC, the current on-demand streaming
4 and conditional download service.

5 A That's absolutely correct.

6 Q And that's a service that engages
7 in activities that are not covered by the
8 statutory license. Correct?

9 A To my knowledge, that's correct.

10 Q Now you gave a lot of testimony
11 this morning about the advertising market on
12 the web, did you not?

13 A Yes, I did.

14 Q Is it correct that you didn't
15 interview anyone in the advertising industry
16 in connection with the preparation of your
17 report?

18 A Again, in my teaching and research
19 I frequently interact with people (Inaudible.)
20 for that matter.

21 Q I'm just having trouble -- I'm
22 leaning over because I'm having trouble

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1 hearing.

2 A Yeah. Okay. Let me speak a
3 little louder. Specifically in connection
4 with the report, I did not interview people,
5 but I did rely on my teaching and research
6 interactions with people. Just to give you
7 one example, Kevin O'Connor, the Founder and
8 CEO of Double Click, the largest internet
9 advertising firm has spoken to my class. He's
10 been on boards with me and there are lots of
11 other people that I interact with from time to
12 time. But I did not interview him
13 specifically on this topic, but I did feel
14 that I was able to have sufficient interaction
15 and knowledge of the advertising industry on
16 the internet, something I teach about in my
17 classes almost every year and read the
18 research papers and the academic journal
19 articles that when I reviewed the documents I
20 was able to make an assessment of their
21 relevance and accuracy.

22 Q What specific data on the

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1 advertising industry did you rely on in
2 connection with your testimony?

3 A I tried to be extremely careful
4 about documenting every number and fact that
5 I relied on and put that explicitly in the
6 report so that it would make it as easy as
7 possible for anybody to verify the numbers
8 that we put in there. So I -- We can
9 obviously assume that without repeating
10 there's a large (Inaudible) boxes of them that
11 I relied on that aren't connected to this
12 report.

13 Q So if it's not identified in the
14 report, you didn't rely on it.

15 A For a specific fact, I would have
16 identified it in the report. For my general
17 knowledge and expertise, again that would be
18 a room full.

19 Q And it's true, is it not, that you
20 spoke to Professor Bakos about his
21 conversations with someone else about from
22 24/7, right, and that's an advertising agency?

1 A I believe you're referring to
2 Professor Yannis Bakos.

3 Q Yes.

4 A Yes. I did speak to him and he in
5 turn spoke to people as well.

6 Q You didn't pick up the phone and
7 call the people that Professor Bakos
8 apparently spoke to. Right? You just relied
9 on it twice removed.

10 A Yeah. We tried to gather as much
11 information as possible and to leverage my
12 time in addition to me spending a lot of hours
13 on this. I asked other people to spend time,
14 to go out and gather the documents, talk to
15 people and then bring that to my attention.
16 That way we could have as much information as
17 possible used in the report given there's
18 finite time that I can spend on it in any
19 given day.

20 Q We're going to spend a fair amount
21 of time with the source materials that you
22 reference in your report, but in particular as

1 to the advertising market, I'd like to know
2 what -- I mean you mentioned generally having
3 some expertise or some experience in your
4 curriculum with respect to advertising and the
5 internet. Can you be more specific? Did you
6 have any experience in connection with
7 advertising for radio on the internet prior to
8 this case?

9 A Well, in the courses I teach, we
10 have sessions devoted to advertising on the
11 internet in all of its different forms and so
12 that was part of the expertise I'm referring
13 to and when I write my papers, for instance,
14 other papers with Professor Bakos you referred
15 to that won the award had to do with pricing
16 of information goods. The specific numbers
17 that I use in the report I cited in the report
18 and those sources are, I think, very well
19 documented.

20 Q As I said, we'll come back to
21 that. My question is much more particular and
22 it's this. Isn't it true, sir, that you have

1 had no experience prior to this engagement on
2 studying or analyzing internet radio
3 advertising as distinguished from advertising
4 on the web more generally? Isn't that a fair
5 statement?

6 A I don't think that's a fair
7 statement.

8 Q Then tell me what specific
9 experience you have with respect to
10 advertising internet radio prior to this
11 engagement.

12 A As I've tried to clarify, your
13 premise that you need to distinguish it from
14 other kinds of advertising, I don't agree
15 with. One of the things that I focus on in my
16 research is understanding some general
17 principles of information goods, of
18 advertising, of for that matter economics of
19 businesses like this in general. So I draw on
20 that research in making my analyses of these
21 and then I'm able to look at specific numbers
22 in the context of that. So the premise that

1 all other research is irrelevant, I simply
2 disagree with.

3 Q I don't think that was my premise.
4 But can you tell the panel specifically again
5 whether you have any prior experience, yes or
6 no, in connection with the subject of
7 advertising on internet radio prior to this
8 engagement?

9 A Once again, when you say "in
10 connection with" I believe that my research on
11 advertising on the internet and on the
12 economics of information goods and the
13 examples that I give in class and my teaching
14 are relevant to this industry.

15 Q Well, let's stick with advertising
16 on the internet for a minute generally. You
17 would agree with me, wouldn't you, that a lot
18 of internet radio under the statutory license
19 is listened to at desk top computers. Right?

20 A Yes, that's correct.

21 Q Did you consider the implications
22 of that phenomena in connection with your

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1 report?

2 A Yes, I did.

3 Q In what specific respect?

4 A Well, the fact that people are at
5 their desk top provides an opportunity to act
6 on the advertising much more quickly than they
7 would, say, if they were in their car. So
8 therefore, this presents more greater value
9 for an ad that's broadcast over internet radio
10 than an ad broadcast in the car because if
11 you're in the car and you hear apply this CD
12 or whatever, it's difficult to act on it. If
13 you're on the internet, they tend to have an
14 a buy button. If you're on the desk top, they
15 have a buy button right there next to the
16 banner ad. You can click on it. You can act
17 on it immediately and that will affect the
18 effectiveness and value of that advertising
19 and consequently ultimately will make that
20 advertising more valuable and increase the
21 revenue you can earn from such an ad.

22 Q That statement you just made

1 relates to advertising on the internet
2 generally, correct, where people are actually
3 watching their screen and watching the ad?
4 Right?

5 A Well, that's a good example of the
6 point I was trying to make earlier. It
7 applies to internet advertising generally.
8 It specifically applies to the radio internet
9 broadcasting industry where they have, it's
10 very common to have buy buttons right next to
11 a music ad, a banner ad, for internet radio.

12 Q Let me ask you this, Professor.
13 You said you played around a lot with internet
14 radio. Right?

15 A Yes.

16 Q Did you do that while you were
17 working, I mean, just sorting of working,
18 listening to internet radio and then dealing
19 with some of the work you were dealing that
20 you had to do for your office?

21 A Sometimes, yes.

22 Q I gather then that from time to

1 time you would minimize the scene, the player,
2 and have your emails up on the scree.

3 A Sometimes I would, although I have
4 a very big set of screens. So I actually have
5 a lot of different windows open
6 simultaneously.

7 Q But if you're working, your
8 attention is on your work, not on the music
9 that is streaming on the background. Right?

10 A I think I multitask. I think I
11 actually enjoy listening to the music and
12 doing the work at the same time. I know a lot
13 of people --

14 Q Do you --

15 A Especially younger people like my
16 children, I see that they even more
17 multitasking than I do.

18 Q And are you able to enjoy the
19 music, look at ads and click on them and work
20 at the same time?

21 A I think I am. Yes.

22 Q You are able to work at the same

1 time you're looking and clicking on ads?
2 You're a better man than I. Did you consider
3 the phenomenon that people minimize their
4 screens so there's no visual image of the
5 player while they're listening to radio?

6 A Yes, I did.

7 Q How did you take that into
8 consideration in your various assumptions
9 underlying your model?

10 A Well, the nice thing is that the
11 way my model is designed, I don't have to make
12 the judgments. The market makes the
13 judgments. So as I described, the banner ads
14 have some benefits in terms of being able to
15 be immediately clicked on and I think that as
16 the market evolves, there will be more
17 opportunities to target those which I
18 described with the automobile companies
19 wanting to target particularly. So I can see
20 some opportunities for doing that more over
21 time.

22 There also may be disadvantages

1 and one of the things that my model does is it
2 looks at what companies are paying to, what
3 advertisers are paying to, companies like
4 Yahoo and uses that as an input into the
5 revenue side, the advertising revenue side of
6 the model. But -- I'll just stop there I
7 think.

8 Q Well, let's talk about what the
9 market's doing, okay, because you say that's
10 an important issue. You testified earlier
11 that Yahoo is deliberately in your judgment
12 not selling video gateway ads because it's
13 investing in the future. Do you remember your
14 testimony to that effect?

15 A I testified that they're not
16 selling video gateway ads and one possible
17 reason is that they are investing in the
18 future.

19 Q Let's get our terminology here
20 right so the panel is with us. A video
21 gateway ad is literally something that is a
22 visual ad like a TV ad that you see on your

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1 computer screen before something occurs.
2 Right? Before a sound recording performance
3 occurs. Right?

4 A That's correct.

5 Q Now if I'm watching a music video
6 and let's distinguish between music videos on
7 the one side and sound recording on the other.
8 Music videos are when there is that
9 audio/visual work that embodies the sound
10 recording showing for example a band actually
11 performing the song. Right?

12 A Yes. I'm familiar.

13 Q You're familiar with that. MTV
14 popularized that and it's been a big hit.
15 Right?

16 A It has. My children particularly
17 enjoy watching this.

18 Q Now if I'm engaged in watching a
19 music video on the web, then obviously I'm
20 engaged in watching because in order to enjoy
21 the video, I have to be watching. Right?

22 A Well, unless you're only

1 listening. Yes.

2 Q But for the most part, the whole
3 point of an audio/visual work, a music video,
4 is to watch it. Right?

5 A I think that's a very big part of
6 it. Music is another big part of it.

7 Q And you're familiar with the fact,
8 are you not, that video prerolls as you said,
9 they're a lucrative form of advertising,
10 right, on the internet?

11 A That's correct.

12 Q Are you familiar with the fact
13 that Yahoo, for example, does indeed engage in
14 video preroll advertising for its music
15 videos?

16 A I am familiar with that.

17 Q And that the rates it is able to
18 charge for those kinds of ads are
19 significantly greater than the rates it is
20 able to charge for forms of internet radio
21 advertising as distinguished from video
22 advertising?

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1 A Well, I'm familiar with the rates
2 they charge for video advertising are
3 extremely high. That's correct. Since as
4 you've noted they don't offer the same ads for
5 audio, we don't have a clear benchmark to
6 compare it to, but I wouldn't be surprised if
7 there were some differences in prices.

8 Q And did you become aware through
9 the discovery process that according to Yahoo
10 the reason why they don't run video prerolls
11 for audio radio is that's there no demand for
12 it from advertisers?

13 A That's not my reading of the
14 evidence.

15 Q Mr. Roback will be here and he can
16 explain it.

17 A Let me explain what my reading of
18 the evidence is. According to third party
19 industry analysts, they conclude that there's
20 very strong demand for video preroll
21 advertising and the other webcssters do
22 provide it and they are virtually sold out in

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1 terms of their video preroll ads. So I would
2 be surprised if Yahoo wasn't able to tap into
3 this market the way the other webcasters are
4 given that they have been fairly successful in
5 capturing other video streams when they want
6 to, other revenue streams when they want to.

7 Q And it's your testimony that there
8 is a sellout for video prerolls on DMCA
9 compliant radio as distinguished from video?

10 A Yes.

11 Q And what's the source of that?

12 A AccuStream.

13 Q AccuStream, we're going to come
14 back to AccuStream. Okay? Any other source
15 that there is essentially 100 percent sellout
16 rate for video prerolls for audio radio?

17 A I believe that's that the case at
18 AccuRadio. It's documented in more detail in
19 the report.

20 Q Anything else you rely on?

21 A It would be documented in the
22 report.

1 Q By the way, you had mentioned that
2 you had written papers on internet
3 advertising. One of my colleagues indicates
4 that we went through the bibliography and
5 couldn't find any at least by obvious title.
6 Are we missing something?

7 A The -- I am currently working on a
8 paper specifically comparing pricing using
9 subscription methods versus advertising
10 methods and my other papers discuss
11 advertising as one of the revenue sources but
12 they don't have advertising in the title and
13 they don't focus exclusively on advertising.

14 Q Is there a specific paper in your
15 bibliography that you wanted to show us that
16 you had previously written and released on the
17 subject of internet advertising?

18 A I would have to get back to you on
19 which papers would be more relevant.

20 Q I don't think I heard that.

21 A I would have to get back to you on
22 which papers would be most relevant.

1 Q Thank you. Now do you agree as a
2 general proposition that an economist should
3 review the facts and data surrounding an
4 industry before one reaches a conclusion about
5 that industry?

6 A Yes.

7 Q Now you mentioned Ting and
8 Wildman. Do you remember that?

9 A Yes, I do.

10 Q They are one of the reports that
11 you relied upon.

12 A Yes, they are.

13 MR. STEINTHAL: Let me mark as
14 Services Exhibit -- What are we up to?

15 COURT REPORTER: I think it should
16 be 15.

17 MR. STEINTHAL: Fifteen for
18 identification a document that's entitled "The
19 Economics of Internet Radio" by Carol Ting and
20 Steven S. Wildman dated September 29, 2002
21 bearing Bate-stamped numbers SX8410 through
22 8440.

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1 (Whereupon, the above-
2 referred to document was
3 marked as Services
4 Exhibit No. 15, for
5 identification.)

6 COURT REPORTER: Mr. Steinthal,
7 could we ask that the witness speak up a
8 little louder for the audio?

9 THE WITNESS: Sure. I'll speak up.

10 BY MR. STEINTHAL:

11 Q Is this the Ting and Wildman
12 report that you referenced?

13 A Yes, it is, although they also
14 provided an appendix with more detailed
15 information instead of spreadsheets which I
16 believe we also shared with you.

17 Q Okay. Do you know or have ever
18 spoken to Ms. Ting or Mr. Wildman?

19 A Yes. I know Steve Wildman. I've
20 met with him a number of times. He's a
21 respected professor who I've been tracking
22 with at Princeton at the Technology Policy and

1 Research Conference. I think most recently I
2 spoke to him maybe last year.

3 Q Before you took on this
4 engagement?

5 A I've known him, yes, before I took
6 on this engagement.

7 Q Are you familiar with the fact
8 that Professor Wildman testified in favor of
9 the recording industry in the last CARP
10 proceeding?

11 A Yes, I was aware of that.

12 Q Were you aware of that when you
13 came into possession of this report and relied
14 on the data?

15 A I was not aware of that initially.
16 When we did the analysis, I did find that out
17 afterwards. Yes.

18 Q You found that out during the
19 course of preparing your report. Is that a
20 fair statement?

21 A I don't recall the exact moment
22 that I found out about it. If I think about

1 it, yes, it probably would have been before I
2 turned in the report.

3 Q I gather that didn't affect one
4 way or the other your desire to rely on the
5 report.

6 A It did make me look at it more
7 clearly in terms of any subjective statements
8 he was making. Mostly this report if you read
9 it, it's actually identifying that that it
10 wouldn't -- I didn't think that would be a
11 problem.

12 Q And I gather you thought that Ting
13 and Wildman undertook their examination and
14 made an accurate report based on the
15 information they had available to them.
16 Right?

17 A My experience with Steven Wildman
18 is that he would give his best fair assessment
19 of the information. Yes.

20 Q Are you aware that the Ting and
21 Wildman report concluded that webcaster
22 streaming under the statutory license

1 generally cannot be downloaded?

2 A Sir, I'm not sure I understood the
3 question.

4 Q Are you aware that Ting and
5 Wildman concluded that webcaster streaming
6 under the statutory license generally cannot
7 be downloaded?

8 A Are you saying can't be ripped or
9 you mean webcaster streaming cannot be
10 downloaded in the sense -

11 Q I'm asking you whether you're
12 aware they took that position. They concluded
13 that.

14 A Can you refer me to where they
15 concluded that?

16 Q Yes. Let's take a look at page
17 two and the text surrounding footnote two and
18 footnote two itself.

19 A Okay.

20 Q Let me read from the paragraph II,
21 "The name 'Internet Radio' provides a good
22 idea of the nature of the service. It is a

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1 radio-like service transmitted over the
2 internet. From the user's perspective, the
3 experience is similar to OTA radio." OTA
4 stands for over-the-air. Right?

5 A That's correct.

6 Q "Programming may be prerecorded,
7 voice tracks, simulcast by an over-the-air
8 broadcaster or real time playback on a remote
9 server with interactively to various degrees
10 but listeners must tune in to receive a
11 webcaster's programming which is delivered
12 through streaming technology (See Section 3)
13 and generally cannot be downloaded²" and then
14 Footnote 2 says "There are some ripper
15 programs that allow users to download streamed
16 contents but generally speaking, they require
17 certain level of computer skills and are a lot
18 more difficult than recording a radio show
19 with a tape recorder." Do you see that?

20 A Yes, I do.

21 Q Do you have any reason to believe
22 that that wasn't an accurate statement when it

1 was made?

2 A Well, with everything that I read,
3 as much as possible I try to verify it myself
4 and this particular statement I went out and
5 sought to verify it myself and I found that
6 while this may have been an accurate statement
7 in 2002 when he wrote it, it's certainly not
8 an accurate statement today. In fact, it's
9 trivially easy to download ripped music today
10 in 2005 or 2006. But I suspect that he, I'm
11 pretty sure he wrote that in good faith based
12 on his knowledge and the circumstances in
13 2002.

14 Q So your testimony that the
15 software -- Strike that. I believe in your
16 deposition you testified that the software you
17 used that was "trivially easy" in your mind to
18 use was called StreamRipper. Right?

19 A No, that's not correct. First
20 off, the phrase "trivially easy" is what the
21 company refers it to and I was verifying that
22 that what was the company itself calls it.

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1 There are several of these companies. The one
2 that I used happened to be called
3 StationRipper.

4 Q I'm sorry. StationRipper. Okay.

5 A That's correct.

6 Q My mistake.

7 A Stream ripping you can think of as
8 the general category. It's sort of now become
9 a category of software and StationRipper is
10 one of the particular companies that
11 specializes in this area. They compete to
12 offer different services and make it easier or
13 more difficult or to make it easier or provide
14 other services for downloading and ripping
15 music.

16 Q They compete? Who is the "they"
17 in your answer? Who competes with
18 StationRipper in the specific mention that you
19 just made?

20 A Well, in my report, I list I think
21 at least three companies that do that. Could
22 you like me to look them up?

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1 Q No. I know exactly what they are.
2 We're going to have -- We spent a little time
3 and see just how comparable they are to
4 StationRipper. Okay?

5 A Okay.

6 Q You're referring, aren't you, to
7 paragraph "AudioQuarter, Blaze Media and
8 Roxio Easy CD. Right? Those are the ones you
9 refer to in your written statement. Right?

10 CHIEF JUDGE SLEDGE: Can you give
11 a page and section for that?

12 MR. STEINTHAL: Yes. I think it's
13 in Section 7 if I recall correctly. It would
14 be page 57.

15 THE WITNESS: Yes. With very
16 little effort, I was able to identify three
17 companies. I don't know. There may well be
18 other companies, but those were three
19 companies whose sites I visited and I quoted
20 for the record, for the report, what they say
21 on their sites. I then went and tested one of
22 them and verified that indeed it worked

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1 essentially as advertised.

2 BY MR. STEINTHAL:

3 Q And the one you tested was
4 StationRipper. Right?

5 A That's correct.

6 Q Now and you said it was trivially
7 easy to use. Right?

8 A Yes. It was trivially easy to
9 use.

10 Q Now do you remember testifying in
11 your deposition that Live365 provides a search
12 functionality that enables you to search and
13 capture songs using a device like
14 StationRipper?

15 A That was where? In the
16 deposition?

17 Q Yes.

18 A Can you refer me to that so I can
19 see the context?

20 Q Sure. Take a look at page 65, I'm
21 sorry, 68, the very bottom of page 68, these
22 very small pages that go onto the other and in

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1 particular at the bottom of page 68 carrying
2 on to 69, you state "For instance, if you go
3 to Live365, you can use a search tool to type
4 in the name of a band or even a specific song
5 and it will search through the large number of
6 streams and find the specific broadcaster
7 that's playing that band or playing that song
8 at that particular time." Do you see that?

9 A Yes.

10 Q And you gave that testimony under
11 oath. Right?

12 A Yes.

13 Q And you were telling the truth.
14 Right?

15 A Yes.

16 Q I really wish I could do a live
17 demo of Live365 now in front of you, but we're
18 going to have to wait until Live365 testifies.
19 But if I were to tell you that in fact Live365
20 does not have that functionality and merely
21 allows you to search for artists and songs
22 based on representative information as to if

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1 I like Van Morrison, what station might I like
2 as opposed to being able to pick up a specific
3 song on a specific station at the time it's
4 playing as you say here at a particular time,
5 would that refresh your recollection that
6 that's more accurate than the testimony you
7 gave?

8 A No. My experience is that if you
9 type in a keyword for a song that you're
10 looking for that it will show you the stations
11 that are playing that song with that word.

12 Q At that particular time. That's
13 what you said under oath. Right?

14 A Yes.

15 Q Okay. Well, we're going to
16 demonstrate that later and see just how
17 accurate you are. Okay?

18 MR. SMITH: Objection to the
19 commentary, Your Honor.

20 CHIEF JUDGE SLEDGE: Sustained.

21 BY MR. STEINTHAL:

22 Q In the next paragraph, you say

1 starting on Line 11, "There are numerous
2 search tools available on the Internet of
3 varying quality and constantly evolving
4 capabilities. So certainly Google, for
5 instance, provides tools for searching sound
6 recordings."

7 MR. SMITH: Objection, Your Honor.
8 Improper impeachment. He hasn't asked a
9 question and he's impeaching. He's just
10 reading the deposition to him.

11 MR. STEINTHAL: I'm about to ask
12 the question. I wanted to read that as a
13 predicate, if you don't mind.

14 CHIEF JUDGE SLEDGE: Overruled.

15 BY MR. STEINTHAL:

16 Q Are you suggesting in your
17 testimony in your deposition that Google will
18 enable you to find songs that you can capture
19 at the particular time that you want to
20 capture them?

21 A What I'm suggesting is that search
22 tools are rapidly evolving. We've seen

1 tremendous improvements in the ability for
2 users to find particular things that they're
3 looking for. Google is an example of a
4 company with constantly improving search
5 technologies.

6 I have personally searched for
7 songs, for instance, through webcasters and
8 been able to find them when they are playing,
9 and I thought that many people would be
10 familiar with the search technology that
11 Google provides to get a sense of how people
12 could find things on the Internet very easily.

13 Q I really want you to be as
14 specific as you can be. Is it your testimony
15 that Google can be used to find a song at a
16 particular time that it's playing?

17 A Google, as I said in my
18 deposition, provides tools, and I haven't
19 verified this recently, but I would not be
20 surprised if you're able to find sound
21 recordings through Google. That's not
22 necessarily meaning that a song while it's

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1 being played, which is different from -- which
2 is what you asked.

3 Q You can certainly use Google to
4 find where to buy a certain song, right?

5 A Or find it in other ways as well,
6 I suspect.

7 Q Now, are you familiar with the
8 fact that the higher the bit rate at which you
9 transmit music through Internet radio, for
10 example -- strike that.

11 Are you familiar with the fact
12 that generally speaking the higher the bit
13 rate the higher the price you'd expect to pay
14 sound recording owners for rights to transmit?

15 A Generally speaking the higher the
16 bit rate the more valuable the recording is
17 likely to be, and depending on the bargaining
18 power, the market structure, that may
19 translate into higher payments to the owners
20 of those sound recordings.

21 Q Do you agree with the proposition
22 that a willing seller would be likely to

1 consider charging a lower price for a lower
2 bit rate stream?

3 A Yes.

4 Q And streaming at lower bit rates
5 is also less likely to be substitutional of CD
6 sales; isn't that right?

7 A I think that's likely, yes.

8 Q I believe you testified earlier
9 today that most non-subscription webcasting is
10 done at 50 kilobits or lower, right?

11 A Yes, that's correct, currently.;

12 Q And 50 kilobits is somewhere
13 between AM and FM radio quality, right?

14 A It really depends on a lot of
15 factors. The quality of the codec is changing
16 quite a bit. That's the ability to convert
17 bits into sound quality. So I don't think it
18 would be appropriate to make a judgment about
19 exactly what you're placing on the quality
20 spectrum.

21 Q Generally speaking, isn't it true
22 that most AM and FM transmissions are between

1 25 and 50 kilobits?

2 A I don't think you can make a
3 mapping like that because when you're
4 transmitting digital information, there are
5 all sorts of ways of encoding it. People
6 become very clever in compressing streams. It
7 could be entirely possible that for certain
8 types of music you could get extremely high
9 quality, audio sound recordings even, with a
10 bit rate of 50 kilobits or less.

11 Q Hold on a second. Did you say
12 mapping or matching like that?

13 A Mapping.

14 Q Matching or mapping?

15 A Sorry. The -- which sentence?

16 Q When you began your answer you
17 said that I don't know if you could compare --
18 and now I've lost my context. I'll --

19 A Okay. Sorry.

20 Q Sorry for the delay.

21 A I'll try and speak up.

22 Q Now, do you want to continue? Go

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1 ahead.

2 A Yeah, let me just say that over
3 time, I think it's likely that those codecs
4 will improve and so we'll be able to get
5 better quality for a given bit rate, and also
6 I believe that the bit rates even for
7 advertising supported radio are likely to
8 increase, and perhaps that was a point you
9 were getting at in terms of the increased
10 substitutability of the CD sense.

11 Q But for right now, you'd agree
12 with me that most of the non-subscription
13 webcasting on DMCA compliant radio stations is
14 between AN and FM quality, right?

15 A I already said no.

16 Q You just didn't know one way or
17 the other?

18 MR. SMITH: Objection, Your Honor.

19 THE WITNESS: Excuse me?

20 MR. SMITH: He keeps
21 mischaracterizing the testimony.

22 MR. STEINTHAL: The record will

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1 speak for itself. I'll move on, Your Honor.

2 BY MR. STEINTHAL:

3 Q Now, you said on page 7 of your
4 written statement, your initial written
5 statement --

6 A Okay, yes.

7 Q -- and I quote, "A willing seller
8 would likely either refuse to make its content
9 available without some guarantees of
10 protection (even if such guarantees were not
11 foolproof) or would set a significantly higher
12 price for types of distribution that were not
13 well protected due to the greater risk,"
14 unquote, right?

15 A That's what my testimony says,
16 yes.

17 Q Well, but you didn't speak to any
18 sound recording owners. What was the basis
19 for that statement?

20 A Fundamental economics of the
21 industry.

22 Q Okay. Are you aware, sir, that

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1 the labels in the United States, quite to the
2 contrary of your proposition, have chosen to
3 distribute compact discs in the physical
4 market in an entirely unencrypted, unprotected
5 format?

6 A Yes, I'm aware of that.

7 Q Are you familiar with the fact
8 that in other countries sound recording --

9 A And that's consistent with they
10 charge far more for compact discs than they do
11 for Internet radio. Furthermore, compact
12 discs were developed far before these
13 encryption technologies we have available
14 today are available, and the difficulty of
15 changing the standards, changing all of the CD
16 players -- there are literally hundreds of
17 millions if not billions of CD players out
18 there, tearing all of those out and changing
19 them with encryption infrastructure would be
20 extremely expensive.

21 Nonetheless, they're considering
22 various attempts to do content protection,

1 which you may have heard of, at considerable
2 expense, and it hasn't been very easy, but the
3 fact that they weren't able to do this when
4 they introduced the CD decades ago doesn't in
5 any way undermine the point that they would
6 prefer, in general, to be able to protect
7 their content.

8 There may be specific artists who
9 have chosen to share some of them perhaps for
10 non-economic reasons. There may be particular
11 promotions or particular strategies, but
12 broadly, they would prefer the people pay them
13 for their content rather people using it
14 without payment.

15 Q Are you familiar with the fact
16 that compact discs are encrypted in other
17 countries by the same sound recording owners,
18 divisions that distribute outside the United
19 States?

20 A There are varying standards, and
21 there are different technologies in different
22 countries, yes.

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1 Q It's not your testimony that the
2 sound recording industry in the United States
3 could not sell their CDs in encrypted form, is
4 it?

5 A There would be significant costs
6 to doing so.

7 Q And is one of the costs that
8 certain major content companies, like Sony and
9 Universal, would thereby lose their very
10 lucrative CD copying revenues?

11 A That may be a factor. I don't
12 think that's probably the largest factor, but
13 that may be one of the considerations.

14 Q Did you consider at all in your
15 analysis the extent of lost or cannibalized CD
16 sales that result from the label's voluntary
17 decision not to encrypt physical CDs?

18 A I didn't analyze in detail the CD
19 industry. That wasn't the goal of this
20 analysis.

21 Q Well, you had given some testimony
22 about the substitution deriving from the

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1 potential of streamer thing, and we're going
2 to come back to that, but you didn't think it
3 was at all appropriate to consider the degree
4 of substitution and the relative amount of
5 substitution that derives from the label's
6 voluntary decision to sell CDs in the United
7 States in unencrypted form, correct?

8 A I wouldn't characterize it that
9 way. For you to say that it wasn't at all --
10 I believe the word was all relevant or all
11 appropriate -- certainly consider the overall
12 economics of the recording industry and the
13 many channels through which they can earn
14 revenues from their sound recordings and the
15 substitution of one to the other, and if you
16 have opportunities in one channel to make
17 money, it's jeopardized by another channel,
18 that would affect how much you -- what you'd
19 be willing to do in that channel that
20 potentially is cannibalizing the other
21 channel.

22 Q To analyze this a little bit

1 further, you are aware -- and I want the panel
2 to understand because I'm not sure they
3 understand the technological things that we go
4 back and forth with -- but we're talking about
5 here, are we not, the ability of a consumer to
6 buy a CD in the United States, go home, and
7 put it in one of these machines that will
8 literally make an exact copy of the CD that
9 you buy that you can then play in your car, in
10 your home stereo, at work, whatever, right?

11 A We're talking about that if that's
12 what you want to talk about.

13 Q Right. That's CD copying, right?
14 Off of a physical CD.

15 A You can rip a CD, yes. That's
16 certainly true.

17 Q Trivially easily, right?

18 A I don't think it's as easy as the
19 streamer thing, Internet radio, having done
20 both.

21 Q It requires literally putting the
22 CD you're copying on one disc on your player

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1 and then physically placing the other one, the
2 other disc, in the device and pressing a
3 button, right?

4 A Do you want me to explain why I
5 think it is not just trivially easier?

6 Q Just answer my question. Isn't
7 that the way the machines work? Yes or no?

8 A I don't think that you're
9 understanding the difference.

10 Q I'm asking a question as to
11 whether the machine works this way. You put
12 it in one, you put it in the other, and you
13 press a button.

14 A In order to copy CDs, first off,
15 as you described you need multiple CD players.
16 You need to put the CDs in repeated times.
17 Each CD might have perhaps a dozen or so
18 songs. For instance, I've tried stream
19 ripping over the Internet by turning it on,
20 letting it run all night long for a week. I
21 have, as I mentioned, over 1,000 songs all
22 categorized and organized on my hard disc and

1 now my iTunes, iPod.

2 If I were to try to do the same
3 thing with CDs, I would have to be there
4 running like a little assembly line, have to
5 buy, you know, a different piece of equipment
6 and swap them in, swap them out. I can let
7 the station rip a run unattended overnight,
8 literally just click a button and have 1,000
9 songs. A thousand songs on CDs would involve
10 dozens of swapping in and out. It would be an
11 expensive use of my time compared to station
12 ripping.

13 So I think there's a big
14 fundamental difference, not to mention the
15 differences that we already pointed out in the
16 capital equipment that's required that not all
17 people have. Whereas for station ripping
18 there's no additional purchase of a CD player
19 or anything that's required. It's just a free
20 download that, as best I can recall, took a
21 minute or two to download onto my computer.

22 So if you have a computer, you

1 already have -- and a hard disc -- you already
2 have all of the equipment you need for station
3 ripping. So your characterization I think is
4 very much off the mark.

5 Q All I asked was whether it was
6 trivially easy to put one disc in one side,
7 one in the other, and press the button, and
8 then you went into this whole song and dance
9 about something else. So --

10 A The trivially easy applies to what
11 is described click a button and you have 1,000
12 songs. The swapping back and forth with
13 different equipment and so forth, by
14 comparison, what? That's probably 100 times
15 more effort. So I don't think that's -- if
16 the first one is trivially easy, then CD
17 copying is not trivially easy.

18 Q Professor, with all due respect,
19 it's one machine. You put it in this disc
20 over here and this one over there and you
21 press a button. I'm not asking you to compare
22 StationRipper. I'm going to give you a huge

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1 platform to talk about it when I show you some
2 exhibits about it, but right now, wouldn't you
3 please agree with me that all it takes to copy
4 a CD in physical form and perfect CD quality
5 onto another disc or your hard drive is
6 putting one disc here, one disc there, and
7 pressing the button?

8 Please.

9 A You can do that. That's correct.

10 Q Thank you.

11 Now, did you consider the extent
12 to which the proliferation of CD ripping and
13 CD burning from physical CDs does, in fact,
14 cannibalize CD sales relative to how much, if
15 at all, stream capturing does? Yes or no?

16 A It's in my report not in any
17 detail. We considered the direct costs and
18 benefits, and I listed some other potential
19 costs that we'd want to consider, but I didn't
20 quantify the actual cost of those.

21 Q And, by the way, isn't there a
22 very huge functional difference between

1 StationRipper, on the one hand, and CD
2 burning, on the other, in the sense that with
3 StationRipper all you can do is copy a station
4 not knowing specifically what songs will play
5 during the time you're capturing the streams
6 as distinguished from copying the album or the
7 song that you want at the time you want it?

8 You would agree with me, wouldn't
9 you, that StationRipper is limited in that
10 respect and CD copying is not? Correct?

11 A My own experience was that I found
12 that using -- sorry. Am I upsetting you? --
13 my own experience was that when I used
14 StationRipper I was able to get a large
15 variety of songs in the specific genre that I
16 was looking for, and to give you an example,
17 I was interested in British invasion, Rolling
18 Stones, Beatles, those kinds of songs that you
19 can't buy on iTunes in the case of Beatles,
20 and by turning it on, I was able to get 1,000
21 in that focused area that I found very
22 interesting and relevant.

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1 The first thing I did was I
2 searched for very narrow, focused radio
3 stations. There are a lot of them that were -
4 - that provided exactly the kinds of, genre of
5 songs that I was interested in. And so for me
6 it was very successful, a lot easier than
7 buying or getting somebody to give me a set of
8 CDs that would cover that same set of songs.

9 Q So, once again, let me come back
10 to the question I asked and not the answer you
11 chose to give. Is it not true that you cannot
12 with StationRipper search for and copy
13 specific songs that you want at the time you
14 want them, whereas with a CD burner you can?
15 Yes or no?

16 A The way I used StationRipper, I
17 got the songs that I was interested in
18 getting.

19 Q Professor.

20 A I searched for a station that
21 played the songs that I was interested in
22 getting, and by letting it run for a

1 significant amount of time, I was able to get
2 the songs that I was interested in getting.

3 Q Now I'm going to ask it the third
4 time. Is it or is it not true that you cannot
5 put into StationRipper the name of a song that
6 you would like to capture and copy that song?
7 Correct?

8 A I did copy the songs that I was
9 looking for. So I think that's incorrect.

10 Q Professor, one more time. Is it
11 not true -- you're under oath -- that you
12 cannot put in the name of a song and capture
13 that particular song that you want using that
14 software?

15 MR. SMITH: Objection. Asked and
16 answered.

17 MR. STEINTHAL: He hasn't --

18 CHIEF JUDGE SLEDGE: Sustained.

19 BY MR. STEINTHAL:

20 Q Now, another one of my questions
21 that I don't think you answered was -- let me
22 strike that. I don't want to go down that

1 path.

2 Are you familiar with a gentleman
3 named Jim Griffin?

4 A I don't recall that name.

5 Q Let me show you a document that
6 was previously in evidence in the case as
7 Services Exhibit 11. Do you know that Mr.
8 Griffin is one of the experts that testified
9 for the RIAA and Sound Exchange in this case?

10 A I didn't know that.

11 Q He talks at the bottom of page 1
12 of this document, carrying over to page 2. He
13 says, "I could start out by talking about
14 piano rolls and how it represented the new way
15 to get music, and I could talk about disc
16 copying and how about that disc copying? Is
17 peer-to-peer really your worst problem? Is
18 people sharing music your worst problem? I
19 think disc copying is probably the worst
20 problem. You get the exact replica of the
21 thing you can buy at the store, but it doesn't
22 seem to me that anybody cares about disc

1 copying anymore, not since Sony and Universal
2 bought Roxio and got into the disc copying
3 business. Since then we've started to forget
4 that disc copying is one of the main reasons
5 that paying for music is voluntary."

6 Do you have any reason to disagree
7 with Mr. Griffin's statement?

8 A I mean, I don't know Mr. Griffin,
9 and I'm here to talk about disc copying. I'm
10 really not in a position to -- I haven't read
11 this whole thing and see the context. It says
12 something about being an advocate, not being
13 balanced up front. You know, I'm sorry. I'm
14 not going to pass judgments until I've had a
15 chance to review this more carefully.

16 Q Now, there are different ways to
17 copy music on the Internet, are there not?

18 A Yes.

19 Q And there are different qualities
20 of music in terms of the music transmission
21 that can be copied on the Internet; is that
22 right?

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1 A In terms of the bit rate that's
2 being delivered? Is that what you're
3 referring to?

4 Q Bit rate or underlying source
5 material, right?

6 A Yes, that's correct.

7 Q So you would agree with the
8 proposition that there are varying degrees of
9 quality of sound recordings that can be copied
10 from the Internet, right?

11 A That's correct.

12 Q And you'd agree with me, wouldn't
13 you, that if the consumer that wanted to copy
14 music had a choice between copying a high
15 quality sound recording and a not as high
16 quality sound recording, all other things
17 being equal, they would choose the higher
18 quality version, right?

19 A No, that's not correct.

20 Q What's the basis for your
21 statement that it's not correct?

22 A Well, usually when you record more

1 bits that requires more bits, and that
2 requires more storage, and so I know a lot of
3 people who choose to record intentionally at
4 a lower bit rate so they can fit more onto
5 their iPod player and more generally
6 oftentimes all things are not equal. There
7 may be certain songs that are available at a
8 particular bit rate, and my teenage son
9 doesn't always care that much about getting
10 audio file quality if he's looking for a
11 particular song.

12 So there are other factors that
13 you need to consider.

14 Q Although you did agree previously
15 that generally speaking, the lower the bit
16 rate, the lower the risk of substitution,
17 right?

18 A That's often the case because it
19 makes a lower quality of recording, but I have
20 just mentioned there are these situations, for
21 instance, when somebody wants to conserve disc
22 space.

1 Q Now, would you agree with the
2 proposition that as between two different
3 potential sources of copying a particular
4 digital sound recording one would ordinarily
5 choose the alternative that took less time,
6 all other things being equal?

7 A All other things being equal, that
8 seems correct.

9 Q And if you were interested in
10 getting copies of the particular songs or
11 albums that you are seeking to put into your
12 iPod or other player, that as between two
13 different forms of copying, all other things
14 being equal, you would prefer to download or
15 copy from a site where you got the exact song
16 you wanted or album you wanted at the time you
17 wanted it rather than setting up a device to
18 copy for a week and hope that something might
19 come in?

20 A That would depend on the person.
21 In my case, I find that a lot of DJs and radio
22 stations expose me to music that I find very

1 interesting and I didn't know in advance the
2 particular name of the artist, the particular
3 track, and so on. I like to rely on their
4 expertise.

5 There are other people who are
6 very familiar with exactly which particular
7 song that they want to go after, and they may
8 have a different set of preferences.

9 Q Let me show you some documents
10 that relate to the devices or the software
11 that you've talked about, unless the panel
12 wants to take a break now.

13 CHIEF JUDGE SLEDGE: Is this a
14 good time for you? Is that what you're
15 suggesting?

16 MR. STEINTHAL: Your Honor, I
17 could do this now. I could mark the exhibits
18 while we have the break and just give them up
19 to you so that we save a couple of minutes
20 that way. If you want to do that, that's
21 fine.

22 CHIEF JUDGE SLEDGE: All right.

1 We'll recess ten minutes.

2 (Whereupon, the foregoing matter
3 went off the record at 3:15 p.m.
4 and went back on the record at
5 3:29 p.m.)

6 CHIEF JUDGE SLEDGE: Thank you.

7 We'll come to order.

8 Mr. Steinthal.

9 MR. STEINTHAL: Thank you, Your
10 Honor.

11 I'd like to mark this as Services
12 Exhibit 16, the document entitled
13 "StationRipper."

14 (Whereupon, the document
15 referred to was marked as
16 Services Exhibit No. 16 for
17 identification.)

18 MR. STEINTHAL: I'm going to go
19 through these materials pretty quickly,
20 Professor, to verify a few things about those
21 websites or software that you identified in
22 your testimony. Okay?

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1 THE WITNESS: Okay.

2 BY MR. STEINTHAL:

3 Q Is Exhibit 16 a copy of web pages
4 associated with the StationRipper software
5 device that you used for purposes of your
6 stream capturing?

7 A They appear to be. I can't verify
8 that this is the specific date and version and
9 so forth that I used and looked at, but it was
10 StationRipper software.

11 Q And if you'd look at the materials
12 that they put on their website, on the first
13 page on the one, two, three, four, five, six,
14 seventh bullet, it says, "Lets you easily find
15 stations to record."

16 A Yes, it does.

17 Q And then later, below it says,
18 "Radio stations, browse a huge selection now."

19 Is it correct, sir, that this
20 software is capable of being set to capture
21 the streams on designated stations, but not to
22 search for specific songs? Is that a fair

1 statement?

2 A Well, first off, let me just
3 clarify. Yeah, it refers to Shoutcast and may
4 have inadvertently said Live365 before. I
5 have been jumping between lots of different
6 webcasters, one to the other, and I believe I
7 should have referred to Live 360 -- I'm sorry
8 -- Shout -- there it is again -- Shoutcast,
9 not Live365. So that may help clarify the
10 question you had before.

11 And that was the one that I used
12 where I could type in a word and stuff. I
13 typed in the word "satisfaction." It would
14 show me a radio station at that moment was
15 playing "I Can't Get no Satisfaction" by the
16 Rolling Stones.

17 Q In the middle of the stream,
18 right?

19 A Some point. It could be just the
20 stream starting. It could be the middle.
21 Yes, that's exactly right, or -- yes, or in
22 some cases there are radio stations that

1 specialize in fairly narrow genres. For
2 instance, if you type in the word "Beetles,"
3 you may have radio stations that just play a
4 very large percent of their time in Beatles.
5 So if you're interested in down those, which
6 in fact I was, I was able to find a lot of
7 Beatles songs that way.

8 Q That station itself wouldn't be a
9 station that qualifies for the statutory
10 license, would it?

11 A I think it would be.

12 Q You're not familiar with the
13 limitations in the statutory license that
14 you're not allowed to play more than four
15 songs by the same artist within a three-hour
16 time period?

17 A Well, as I said, it plays a lot of
18 those songs. It doesn't play exclusively
19 those songs.

20 Q Let's go back to StationRipper.
21 You do agree with the statement, do you not,
22 that you can't use this to search for specific

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1 songs. You can only use it to set it to
2 capture streams from a given station, correct?

3 A Well, I think as I just explained
4 you can use Shoutcast to search for particular
5 songs or particular stations and then use
6 StationRipper to rip those songs or stations.

7 Q And that will only help you if
8 you're looking for a specific song insofar as
9 you get to it after it has started, right?
10 Just yes or no.

11 A Essentially yes.

12 Q Okay. So you do agree with the
13 proposition that you can't use the
14 StationRipper software to set it to copy
15 specific songs that you'd like to copy in
16 full, correct?

17 A No, that's not correct. I mean,
18 we've been over this territory, but let me
19 repeat. I was interested in a set of songs
20 from the Beatles. I used Shoutcast to help me
21 find stations that were playing those songs.
22 I turned on StationRipper. Today I have 1,000

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1 songs, including the songs that I was looking
2 for. I can use iTunes to categorize those
3 lists, all the songs by the Beatles, by title,
4 by all the other information. So I used this
5 tool to do exactly what you're saying can't be
6 done, which is to fill up my disc with the
7 songs that I was looking for.

8 Q That's not what that question is,
9 but I think you've made it pretty clear that
10 you can only search a station. You can try
11 to get information to help you choose the
12 right station to capture what you want, but
13 the device can only be used or the software
14 can only be used to capture the songs on a
15 given station.

16 A Well, again, that's incorrect.
17 You can actually search multiple stations at
18 a time. With the free version, you can search
19 two stations at a time, and I believe there's
20 a version you can purchase for some small
21 amount -- maybe it's on this web page here --
22 like what is it? Nineteen dollars, yeah,

1 \$19.99. It allows you to search 600 stations
2 at a time.

3 So it's really not a given station
4 at a given time. It says here 600 stations at
5 a time.

6 Q All of which you'd be setting on a
7 given station or a given set of stations, not
8 knowing specifically what's going to play
9 during the time you set it, right?

10 Let's move on. Now, let's look at
11 Services Exhibit 17, which is another one of
12 the software devices being referenced.

13 (Whereupon, the document
14 referred to was marked as
15 Services Exhibit No. 17 for
16 identification.)

17 BY MR. STEINTHAL:

18 Q This Exhibit 17 refers to one of
19 the other services that you mentioned you were
20 familiar that captured streams, correct?

21 A This is one of the services that
22 captured streams. I didn't personally use

1 this service.

2 Q Okay. Does this appear to be a
3 printout from the website?

4 A It appears to be a printout from
5 their website, right.

6 Q And if you'd look at the first
7 page of Exhibit 17, it says in the first
8 sentence, "Audiocorder is a sophisticated, yet
9 easy to use audio recording program for your
10 Macintosh. With the click of a button, you
11 can record from any audio source that you
12 connect to your Mac through a microphone or a
13 direct cable connection. Audiocorder makes it
14 easy to record music as well as make spoken
15 recordings, and it can automatically transfer
16 recordings to iTunes."

17 Do you see that?

18 A Yes, I do.

19 Q Is that your understanding of the
20 way this device works or this software works?

21 A That's what it says.

22 Q It's more than a specifically

1 designed for stream capture device. It's a
2 general recording device, is it not?

3 A Well, if you read on, one of the
4 things it says it's used for is automated
5 recording of radio programs on it looks like
6 it's the third page, yes.

7 Q Do you see on the second page it
8 says that it can work like a standard tape
9 audio recorder in the first paragraph?

10 A Yes.

11 Q And then the third paragraph,
12 "Audiocorder works like a PCR"?

13 A Yes, I see that.

14 Q So you'd agree, would you not,
15 this is marketed as a general recording device
16 more than it is a stream capturing device,
17 correct?

18 A I honestly don't know the
19 motivations of all the people who download
20 this. I wouldn't be surprised if many of them
21 use it for stream capturing or many of them --
22 I wouldn't be surprised if many of them use it

1 for other services.

2 Q But you don't know exactly how
3 many people actually use this device for
4 stream capturing, correct?

5 A I don't know exactly how many
6 people are using it for that purpose, no.

7 Q You don't have any sense of the
8 magnitude of the number of people that
9 actually download this to use it for stream
10 capturing, correct?

11 A No, that's not correct.

12 Q What's the basis for your
13 testimony that you have some understanding of
14 the magnitude of stream capturing done with
15 this device?

16 A Well, one of the things I did in
17 trying to learn more about this industry is I
18 visited iTunes, which is one of the most
19 popular music websites, and there's a tool
20 called Alexa that I mentioned earlier, which
21 shows you that people who visit iTunes, what
22 are the other sites that they also visit

1 frequently? And so I looked at the list of
2 other sites that people who visit iTunes
3 visit, and it's my recollection that
4 Audiocorder was one of the top five or six
5 sites that people visit, maybe even more
6 popular than that, which suggests to me that
7 if my testimony depended on the exact amount
8 of stream ripping that was going on today, I
9 could go and make a more accurate estimate of
10 how many people that would imply for the
11 Internet population as a whole.

12 Q Let's focus on what you just
13 testified to, people who are iTunes users that
14 go to Audiocorder. You don't know, do you,
15 why an iTune user would use Audiocorder, do
16 you?

17 A Well, I visited these websites,
18 and I saw what they were marketing themselves
19 as, and I quoted some of them in the
20 testimony. Would you like me to read what the
21 reviews were?

22 Q Please feel free to look at your

1 testimony.

2 A So this is what these sites said
3 that they did.

4 Q What page?

5 A This is page 57. It's in a
6 paragraph labeled "Content Protection." And
7 on the website that I saw for Audiocorder,
8 which may or may not be identical to the one
9 you just provided, but we provided a copy of
10 it as an exhibit; it described it -- it was
11 self-described as "perfect for unattended
12 recording of stations."

13 Similarly, BlazeMediaPro, another
14 popular site that people visited, described
15 itself as "you can record from," ellipses,
16 "streaming audio or any source available on
17 your system."

18 And Roxio Easy CD Creator said,
19 "Easy Audio Capture is a new utility that
20 makes it trivially easy to capture audio files
21 to your hard drive, including those from,"
22 ellipses, "an Internet radio broadcast through

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1 your sound card."

2 And we provided the exact copies
3 of the web pages that said each of these
4 things. So that gives me some indication of
5 how they were describing themselves.

6 Q Let's focus on Audiocorder right
7 in front of you.

8 A All right.

9 Q Isn't it true, sir, that you can
10 use this device or software to convert an
11 iTunes track into a format that you can play
12 on a device other than your iPod?

13 A I don't know.

14 Q You don't know that.

15 A I don't know. It's possible.

16 Q So if I were an iTunes user and
17 Alexa told me that one of the things that one
18 of the sites frequently visited by iTunes
19 users is audio recorded, it might very well be
20 to enable me to take the music I brought from
21 iTunes and use it in different capacities,
22 right?

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1 A That's possible.

2 Q So you don't really know as you
3 sit here today how users of the Audiocorder
4 device use the Audiocorder device, correct?

5 A I don't know how every user is
6 using it. What I do know is -- well, I'm not
7 going to read it again -- how they quoted that
8 it was useful for stream ripping, and indeed,
9 although I didn't test every piece of software
10 that was available for this, I tested one of
11 them, and it was, in fact, trivially easy to
12 use for audio recording.

13 My testimony really doesn't depend
14 at this point on the magnitude of stream
15 ripping. I didn't even use it in my economic
16 calculations. I just pointed out that it was
17 possible, and I verified that it was possible.
18 Your own expert, Bob Roback himself has said
19 that it was possible. I can quote what he
20 said. He agreed --

21 Q We'll stipulate that it's
22 possible, sir.

1 A Yeah. Well --

2 Q The question is do you have any
3 information as to how frequently it is done
4 using any of these devices that you cite in
5 your testimony. Yes or no?

6 A Sorry. Could you repeat the
7 question?

8 Q Do you have any information as to
9 how frequently these devices are actually used
10 to capture Internet radio streams as opposed
11 to for other purposes, like converting tracks
12 that you buy from iTunes so that you can play
13 it on devices other than your iPod?

14 A I have not undertaken to assess
15 the exact quantity of that, but I know when I
16 talk to my students and I ask them every class
17 how widespread this kind of ripping of music
18 is from various sources, that it's extremely
19 widespread. I verified that it's very easy to
20 do.

21 Because I didn't choose to
22 quantify it, I didn't go ahead and make that

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1 assessment. I thought that the direct cost-
2 benefits were something I would focus on, and
3 I would just give qualitatively the
4 information that, as you stipulated, this is
5 something that people can do.

6 MR. STEINTHAL: Okay. I'd move
7 Services Exhibit 17 into evidence.

8 CHIEF JUDGE SLEDGE: Any objection
9 to Services Exhibit 17?

10 MR. SMITH: No, Your Honor.

11 MR. STEINTHAL: I'll try to do
12 this quickly.

13 THE WITNESS: Me, too.

14 CHIEF JUDGE SLEDGE: Without
15 objection, Services Exhibit 17 is admitted.

16 (Whereupon, the document
17 marked Services Exhibit No. 17
18 for identification was
19 received in evidence.)

20 BY MR. STEINTHAL:

21 Q You mentioned in your testimony
22 BlazeMediaPro. I'm going to show you what we

1 will mark as Services Exhibit 18.

2 (Whereupon, the document
3 referred to was marked as
4 Services Exhibit No. 18 for
5 identification.)

6 BY MR. STEINTHAL:

7 Q Professor Brynjulfsson, take a
8 look if you would at Services Exhibit 18.
9 Does this appear to be a printout from the
10 BlazeMediaPro website?

11 A Yes, that's what it appears to be.

12 Q And this is one of the services or
13 pieces of software you identified in your
14 testimony previously?

15 A That's correct.

16 Q And this one just at the very
17 front on the first page indicates, does it
18 not, that it's a "powerhouse, all-in-one
19 converter, burner, audio and video editing
20 software"; is that right?

21 A I see those words on this page,
22 yes.

1 Q You would agree with me, wouldn't
2 you, that this is a multi-purpose recording
3 device that also has the capacity to capture
4 streams?

5 A That's what it appears to be.

6 Q And this one, if I get it right,
7 on page 6 of this exhibit costs \$50; is that
8 right?

9 A I'm sorry. I can't see the page
10 numbers on this, but --

11 Q Right after page 5 of 5 it starts
12 over again. Do you see it says "purchase
13 price, \$50.00"?

14 A Maybe you could just show it to me
15 here.

16 Q Well, I'll tell you what. I'm
17 just going to move this into evidence and
18 leave it the way it is.

19 A Sure.

20 MR. STEINTHAL: If there's no
21 objection, we'll move it in that way. Move
22 Services Exhibit 18 into evidence, Your Honor.

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1 CHIEF JUDGE SLEDGE: Any objection
2 to Exhibit 18?

3 MR. SMITH: No, Your Honor.

4 CHIEF JUDGE SLEDGE: If there's no
5 objection, Exhibit 18 is admitted.

6 (Whereupon, the document
7 marked Services Exhibit No. 18
8 for identification was
9 received in evidence.)

10 BY MR. STEINTHAL:

11 Q Another one of the services or
12 software that you cite in your testimony is
13 the Roxio Easy Media Creator, correct?

14 A Yes, that's correct.

15 Q Let me have you look at Services
16 Exhibit 20.

17 We're skipping 19, Your Honor,
18 just trying to move quickly and pre-marking
19 things,'

20 A Thank you.

21 Q And does this appear to be a
22 printout from the Roxio Easy Media Creator?

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1 A It's a printout of some of the web
2 pages. It doesn't -- I don't recall this
3 being the one that I looked at, but it does
4 appear to be the one from a website with the
5 software.

6 Q Is it consistent with your
7 recollection that the Roxio product is a
8 general recording device that can be used for
9 editing and recording purposes, including
10 capture and stream?

11 A Well, my recollection was when I
12 visited this site the words "trivially easy to
13 capture audio files, including those from
14 Internet broadcasting or sound card" were
15 fairly prominent and I didn't have to -- I
16 don't recall digging around. I don't happen
17 to see those here. So it may be that they've
18 updated or changed their website from time to
19 time.

20 Q Do you see on the cover page?

21 A The front page?

22 Q Yeah. It says in the middle of

1 the paragraph under Roxio Easy Media Creator
2 8 Suite, "Easy Media Creator 8 Suite enables
3 you to edit, backup, burn, and copy all of
4 your video, photos, music, and data
5 seamlessly."

6 A Yes, I see that.

7 Q Is that generally consistent with
8 what you understood this product to be able to
9 do?

10 A Well, as I mentioned, I recall
11 seeing those words that I just quoted a moment
12 ago. I don't happen to see those, but again,
13 maybe they've updated the web site or even the
14 product since then.

15 Q Do you see the pricing for the
16 product on the third page of the exhibit?

17 A Yes, I do.

18 Q Are you familiar with the services
19 of Exhibit 20?

20 A It looks like this is British.

21 MR. SMITH: Your Honor, I object
22 to this. It has got a different name. It

1 says Roxio Easy Media Creator 8 Suite, whereas
2 the testimony says Roxio Easy CD Creator, and
3 the witness has not identified this document
4 and said it doesn't look familiar to him.

5 MR. STEINTHAL: I just have a
6 quick question, Your Honor.

7 CHIEF JUDGE SLEDGE: Yes, sir.

8 BY MR. STEINTHAL:

9 Q Do you understand this to be a
10 related product to the one that you referenced
11 in your testimony?

12 A It appears to me. I doubt they
13 would be able to use so many similar words if
14 it weren't.

15 MR. STEINTHAL: Your Honor, maybe
16 I can ease the process a little bit and see
17 whether he recognizes Exhibit 21, which is
18 also bearing the name Roxio, and maybe this is
19 a better website that he actually went to.

20 (Whereupon, the document
21 referred to was marked as
22 Services Exhibit No. 21 for

1 identification.)

2 BY MR. STEINTHAL:

3 Q Do you recognize Exhibit 21,
4 Professor?

5 A No.

6 Q Just another printout that bears
7 the name Roxio for a product called Easy
8 Media Creator 8?

9 A That's what this printout is
10 apparently.

11 Q Do you understand this product to
12 be similar to or the one that you referred to
13 in your testimony?

14 A I don't know. It has a different
15 name. It doesn't look familiar.

16 Q What is different about the name
17 of this product.

18 A This one is Easy Media Creator,
19 and I referred to Easy CD Creator. Companies
20 sometimes have suites of products, Microsoft
21 Word, Microsoft Excel, et cetera, that have
22 different functionality.

1 Q Do you see that this refers to a
2 product that is used to easily burn unlimited
3 CDs and DVDs, looking at page 2?

4 A Yes, it says easily burn unlimited
5 CDs and DVDs in the first bullet.

6 Q I gather whether looking at
7 Exhibit 20 or 21 or your recollection to what
8 you actually looked at on the web, you don't
9 have any knowledge as to how frequently users
10 use this technology to capture DMCA compliant
11 radio streams, correct?

12 MR. SMITH: Objection to the
13 extent the question applies to these documents
14 which are not in evidence and are about
15 products he doesn't know anything about.

16 CHIEF JUDGE SLEDGE: Overruled.

17 THE WITNESS: Sorry. Could you
18 just restate the question?

19 MR. STEINTHAL: Yeah, I'm happy to
20 do that.

21 BY MR. STEINTHAL:

22 Q Is it correct that you don't know

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1 how extensive, if at all, users use the Roxio
2 device to which you testified about for the
3 purpose of capturing Internet radio streams of
4 stations that are subject to the statutory
5 license as distinguished from one of the other
6 purposes that one can use the Roxio product?

7 A Well, what I know is that the
8 product that I looked, which may or may not be
9 this one that you're referring to, advertised
10 itself as being trivially easy to capture
11 Internet radio broadcasts through your sound
12 card, and I would expect they wouldn't say
13 that unless they expected some people to do
14 that.

15 And I also know that it was a site
16 that a number of -- a significant number of
17 people visited. If it were very important to
18 know exactly how widespread stream ripping was
19 today, we could make a more precise estimate
20 of that. However, based on my expertise in
21 the industry, and I have frequent interactions
22 with people who do capture music from the

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1 Internet, my sense is that it's very easy to
2 do. I've done it, and that if nothing
3 changes, it will likely become more prevalent.

4 Q And what do you base your expert
5 opinion on that if nothing changes it is
6 likely to be more prevalent?

7 What, if any, study or analysis
8 have you done to back up that statement, sir?

9 A One of the most common things I do
10 in my MBA classes is we discuss the music
11 industry. In fact, every year for fun I do a
12 little poll of my students. It's a non-
13 scientific poll, and I ask them how many
14 people have ripped music from the Internet,
15 how many people buy CDs, how many people
16 download so that I get kind of a pulse, and we
17 have a case discussion where we discuss what's
18 done.

19 Each year the number of students
20 who buy CDs gets smaller and smaller. The
21 number of students who say they rip music gets
22 larger. The ones who say that they aren't

1 ripping, many of them are actually students
2 who aren't aware of how easy it was to do.

3 So based on my research and
4 teaching, I have a sense of the way the market
5 is evolving. I go to conferences where this
6 is discussed. There's a NBR conference, for
7 instance, where Internet file sharing was
8 discussed.

9 I go to -- I speak at conferences
10 where this is discussed. I was at a
11 conference at Harvard Business School a few
12 years ago where representatives of media
13 industry, the recording industry were present
14 and talked about this issue, and there was a
15 lively discussion among the students on where
16 the industry would be evolving.

17 So I think it's fair to say it's
18 something I've thought about and looked into
19 quite a bit.

20 Q And I want to focus on your use of
21 the phrase "this issue," okay? What you said
22 three or four times in response to that last

1 question.

2 Are you going to sit here under
3 oath and tell us that you ask you students
4 when they said they ripped Internet music how
5 many of them actually ripped DMCA compliant
6 radio stations that are operating under a
7 statutory license?

8 A I did not ask them about DMCA
9 compliant radio stations.

10 Q We are not here, sir, to talk
11 about Internet music as a whole. We're here
12 to talk about DMCA compliant statutory
13 licensed stations. Do you have any evidence
14 that you can point to, any evidence that you
15 can point to, quantifying the extent to which
16 any of the devices that you have testified
17 about today are actually used to capture
18 streams of statutory licensed stations?

19 A Yes. I feel very confident that
20 this is something that's feasible and based on
21 related markets and products, that this is
22 something that people do in related areas, and

1 that as people become more aware of it, I
2 would expect that it would become more
3 prevalent.

4 So I'll stop there.

5 Q No other evidence other than what
6 you have just testified to, right?

7 Indeed, you mentioned two studies
8 in your direct testimony, one by Professor
9 Liebowitz and one by -- who was the other one?

10 A David Blackburn, I think.

11 Q David Blackburn. Isn't it true,
12 sir, that both of those studies or reports
13 refer to Internet music generally or file
14 sharing and don't specifically refer to
15 statutory licensed radio?

16 A Part of the reason that I believe
17 I've been called to testify is to draw on my
18 knowledge and expertise in this industry and
19 be able to make inferences from relevant
20 evidence and related products and
21 technologies.

22 So when I read that dissertation

1 and that academic paper, it helped me get an
2 understanding for some of the forces at work,
3 and I believe that many of those same factors
4 would be important for the case of Internet
5 radio.

6 Q But the answer to my question was
7 neither of those articles refer to Internet
8 radio, right?

9 A I don't recall whether those words
10 specifically were used.

11 MR. OXENFORD: Again, we're having
12 trouble hearing the witness.

13 THE WITNESS: Okay.

14 BY MR. STEINTHAL:

15 Q Now, your analysis proceeds from
16 the assumption that the willing buyer, willing
17 seller market to be replicated is one in which
18 the label sellers have substantial market
19 power, correct?

20 A They have substantial bargaining
21 power is the words I used.

22 Q Do you make a distinction between

1 substantial market power and substantial
2 bargaining power?

3 A Well, I use bargaining power in a
4 very specific sense, referring to how we
5 divide up the surplus. In different contexts
6 people use market power loosely and in
7 different ways. I'm trying to be precise.

8 Q Now I can't hear.

9 A I use bargaining power in a very
10 specific way regarding -- referring to the way
11 that the surplus would be divided up between
12 buyer and a seller. So it has a very
13 specific, concrete use in this.

14 The word market power is sometimes
15 used loosely and applied in lots of different
16 situations.

17 Q As you understand the word market
18 power, do you make a distinction between an
19 entity and a negotiation can have substantial
20 bargaining power and substantial market power?

21 A Well, as I say, I'm going to use
22 the word bargaining power. I've defined that,

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1 and market power sometimes refers to a
2 monopolist or other types of situations that
3 aren't the case here.

4 Q Well, you can have substantial
5 market power and not be the single seller in
6 a market, right?

7 A You could use the word that way.

8 Q You testified this morning on your
9 direct testimony as a practical matter the
10 labels in dealing with the webcasters as you
11 see them under the statutory license control
12 an indispensable input to their business,
13 correct?

14 A Yes, that's correct.

15 Q And that gives the labels
16 substantial bargaining power.

17 A That is correct, yeah.

18 Q Now, I believe your testimony, if
19 not specifically here in your written
20 testimony, was that webcasters in the market
21 that you're looking at would have little
22 choice but to get a license from all the Big

1 Four major record companies, correct?

2 A They would have choice, but little
3 choice.

4 Q Now, you did not seek to create a
5 model for a freely competitive market,
6 correct?

7 A Well, I do believe these companies
8 are competing with one another. Again, the
9 word "competitive" is sometimes used loosely
10 and sometimes refers to what economists call
11 perfect competition where people have no
12 bargaining power, no ability to affect prices
13 whatsoever.

14 So if you are using the word in
15 that sense, no, I would not consider this a
16 market where the players have zero bargaining
17 power.

18 Q And you did not seek to replicate
19 such a hypothetical competitive market here,
20 did you?

21 A Again, the word "competitive," are
22 you referring to perfectly competitive with no

1 bargaining power or are you --

2 Q Yes.

3 A -- referring --

4 Q Let's take your definition of a
5 perfectly competitive market. You didn't seek
6 to replicate a perfectly competitive market
7 here.

8 A There are many definitions of
9 competition. There's monopolistic
10 competition. There's perfect competition.

11 Q One of which, let's take your
12 definition, one in which there is no
13 bargaining leverage whatsoever as between the
14 participants and the market.

15 A What about that?

16 Q You did not seek to replicate a
17 market in which the buyers and the sellers had
18 equal bargaining power, correct?

19 A Well, my model can easily adapt
20 any level of bargaining power. As you may
21 recall, there's a parameter in there. You
22 could set it to 50 percent if you'd like.

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1 That would represent the case where they had
2 equal bargaining power. So the model would be
3 unaffected by that choice.

4 Q Well, we'll come back to that in a
5 moment, but the fact is that when you
6 undertook your analysis, you assumed a market
7 in which the labels had substantial bargaining
8 power and the webcasters have little
9 bargaining power, correct?

10 A No, I don't think you entirely
11 understood the analysis. What we did was we
12 analyzed the surplus that was available, and
13 that would be available regardless of the
14 bargaining power. So most of the analysis
15 really doesn't depend at all on the bargaining
16 power at all. The same analysis would carry
17 through the same numbers and so forth.

18 There's a parameter in there for
19 bargaining power. My judgment is that the
20 record labels have substantially more
21 bargaining power than the webcasters. So when
22 we enter that in, you would see how that

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1 surplus was divided. That didn't affect the
2 rest of the model.

3 If you for some reason thought
4 that the webcasters had as much bargaining
5 power as the labels, you could use the exact
6 same model. You could plug it in. In fact,
7 we did that exact exercise right here this
8 morning where we examined what would be the
9 case if they had equal bargaining power.

10 And as you may recall, that led to
11 a small adjustment in the surplus division.
12 I actually stated for the record what the
13 amounts of the surplus would be going to each
14 party. So that was the model that we just
15 presented.

16 Q So what you're saying is that
17 essentially you take the model you created and
18 just adjust for equal bargaining power by
19 changing the 75 to 50, right?

20 A That's it. That's exactly it.

21 Q Okay. But when you were preparing
22 your model, you rejected the concept of

1 modeling based on a competitive market in
2 which there were multiple sellers and multiple
3 buyers with equal bargaining power, correct?

4 A No. Again, we have multiple
5 sellers. I described the sellers. We have
6 multiple buyers. the models carries so you
7 can have equal bargaining power if you want
8 to. That's exactly the model that we just
9 went through. I don't want to do it again.

10 Q Well, we're going to go through it
11 again in painful detail, I'm afraid. Now, the
12 fact is that the 75 percent surplus figure
13 that you arrived at was essentially the
14 midpoint between a market in which the labels
15 would have all of the bargaining power and get
16 100 percent of the surplus and a market in
17 which entities had equal bargaining power,
18 right?

19 A Seventy-five percent is the
20 midpoint between 100 percent and 50 percent.

21 Q And that's basically how you got
22 to the number, right? You just took the

1 midpoint?

2 A No. I considered the bargaining
3 power that each of the parties had, and we
4 discussed this a little bit. I'd be happy to
5 recapitulate. The way we got to that number
6 was that we considered that the labels own an
7 indispensable asset, as you pointed out
8 earlier. They owned the copyrights. It's
9 illegal for the webcasters to broadcast that
10 music without the label's permission. They
11 have multiple channels that they can offer
12 that music in, and this asset is greatly
13 valued by consumers. People are willing to
14 pay a lot for it.

15 Conversely, the webcasters are an
16 industry with relatively low barriers to
17 entry. That means that there's nothing that
18 prevents somebody from coming in and setting
19 up shop. You can buy webcasting services.
20 You can actually outsource them. You don't
21 even have to buy your own equipment if you
22 want to. Companies like Live365 will help set

1 that up for you if you want.

2 In the negotiation, the labels
3 will have many alternatives. They could walk
4 away from the agreement and still sell their
5 music through many other channels and make a
6 lot of money.

7 The webcasters, conversely,
8 wouldn't be able to be in business if they
9 didn't come to an agreement. So weighing
10 those factors, it was clear to me that the
11 labels had substantially more bargaining
12 power. I thought a conservative estimate of
13 that was 75 percent, that they would be able
14 to be in a position to capture 75 percent of
15 the surplus from bargaining between the two
16 of those two groups, those two parties,
17 although you could make the case there would
18 be more than that.

19 Q Are you familiar with the term --
20 and I think you've used it today -- perfectly
21 competitive market, right?

22 A Yes, I'm familiar with that term.

1 Q Is that a market in which the
2 seller has no bargaining power?

3 A the way that it's normally used in
4 economics text is that in a perfectly
5 competitive market, a seller is unable to
6 affect the price at all. So in that sense
7 they have no bargaining power whatsoever. So
8 you might think that if you are a small
9 producer selling corn or something, you're an
10 individual farmer; you're not in a position to
11 affect the price of corn. So that would be an
12 example of what economists sometimes call a
13 perfectly competitive market.

14 Q In a perfectly competitive market,
15 does the price tend to reflect the seller's
16 marginal cost of production?

17 A Yes, it does.

18 Q And so in a given market, which is
19 a perfectly competitive market, if my marginal
20 costs of distribution of the good in that
21 market was ten, ten units, you would expect a
22 price to be at or near ten, right?

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1 A Yeah, in a stylized, idealized
2 textbook model, that's one of the results you
3 get.

4 Q Now, you agree that there's no way
5 to quantify the 75 percent figure that came up
6 with with specificity. I think you said that
7 this morning, right?

8 A Not down to the decimal point, but
9 certainly I feel very confident that it's at
10 least 75 percent. But, again, this is
11 something that the way I designed the model,
12 it's easy for whoever to make their own
13 judgments and put in a different number. I
14 designed it in such a way that it's very easy
15 for people to read the evidence and make their
16 own judgments.

17 Q I appreciate that, and we will get
18 to your charts later on.

19 But in getting to the 75 percent
20 number, it was premised in part on your
21 observation on page 5 of your written direct
22 testimony, which I think you said already

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1 today that webcasters in a free market would
2 have little choice but to seek a license from
3 all four of the majors, right?

4 A Is that on page 5? It looks like
5 maybe it's on page 6.

6 Q Yes.

7 A Let me see where that is.

8 Q You've said it today as well,
9 right?

10 A Yeah, little choice, sure.

11 Q Now, do you make a distinction
12 between the bargaining power of radio services
13 operating under the statutory license and
14 companies that engage in on demand streaming
15 and conditional download services?

16 A Well, a lot of them are the same
17 companies. I didn't analyze in detail that
18 industry, but I know a lot of them are the
19 same companies.

20 Q Well, my question is whether you
21 would agree with me that there's a
22 substantially different amount of -- strike

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1 that.

2 Would you agree with the
3 proposition that webcasters operating under
4 the statutory license are very different than
5 services engaged in on demand streaming and
6 limited download delivery in terms of the
7 bargaining power they have relative to the
8 four majors?

9 A Are they very different? There
10 are some differences and there are some
11 similarities.

12 Q Did you in arriving at your 75
13 percent figure make any adjustment for the
14 different bargaining power between services
15 operating under the statutory license and
16 services providing on demand services?

17 A I'm not really sure I understand
18 what your question is when you say did I make
19 --

20 Q Well, let me try it again this
21 way. You arrived at your 75 percent figure on
22 the basis of assessing a market in which you

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1 believe the entities operating under the
2 statutory license had very little choice but
3 to get a liense from all four of the majors,
4 as you said, because they had an input that
5 was indispensable to their product, correct?

6 A That was part of my reasoning,
7 yes. That was definitely a factor.

8 Q Now, did you consider in giving
9 that testimony the different testimony that
10 was given during the depositions by Mr.
11 Kenswil for Universal Music Group?

12 A You'll have to refresh my memory
13 on that.

14 MR. STEINTHAL: We will have
15 marked as Services Exhibit 22 an excerpt from
16 the deposition of Lawrence Kenswil of
17 Universal Music Group.

18 (Whereupon, the document
19 referred to was marked as
20 Services Exhibit No. 22 for
21 identification.)

22 BY MR. STEINTHAL:

1 Q Take a look at the bottom of page
2 74, starting on Line 22, where I asked Mr.
3 Kenswil the following question: "Let me go
4 back to ask you this question with respect to
5 non-on demand Internet radio services. Is it
6 your view that non-on demand Internet radio
7 services have to have a license from all the
8 major labels in order to offer a desirable
9 product?"

10 Answer: "No."

11 Question: "Why is that?"

12 Answer: "Because radio doesn't
13 play everything, and you could program very
14 good radio stations from a much smaller supply
15 of music than the entire universe of music and
16 have a very satisfying programming service."

17 Did you consider the testimony of
18 Mr. Kenswil of Universal Music Group in
19 connection with arriving at the conclusions
20 that you arrived at with respect to the
21 indispensable nature of each of the four major
22 labels' catalogues to a entity operating under

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1 the statutory license?

2 A I certainly considered this back -
3 - I may well have read this. I read a large
4 number of documents. I don't think it's
5 inconsistent with my conclusion.

6 Q You don't think this is
7 inconsistent with the conclusion you reached
8 that you testified to earlier today that you
9 viewed a webcaster operating under the
10 statutory license to have an indispensable
11 need to access the catalogues of the four
12 major record companies in order to operate a
13 successful digital music service?

14 MR. SMITH: Objection.
15 Mischaracterizes the testimony earlier.

16 CHIEF JUDGE SLEDGE: In what way?

17 MR. SMITH: By saying that he said
18 it was indispensable for anybody operating
19 under the statutory license. That is not what
20 he said. The testimony would address
21 webcasters, and it did not use the word
22 "indispensable."

1 CHIEF JUDGE SLEDGE: I don't
2 recall that substance being inconsistent with
3 his testimony. Overruled.

4 THE WITNESS: Let me clarify it,
5 which obviously was a little bit of confusion
6 here. I said that the webcasters had little
7 choice; I made it quite clear they had some
8 choice, but little choice. You could have a
9 very focused niche program that might have a
10 small audience in a particular area, but even
11 if you picked -- you know, sure, if you picked
12 an area like pop music, that would require the
13 four labels and even most other broad genres
14 are cut across the four labels.

15 What's indispensable -- and this
16 is an important distinction -- is that you
17 need access to the copyrighted music. So in
18 that sense the owners of the webcasting could
19 not exist without access to copyrighted music.
20 So that part is indispensable, having access
21 to the music, but it's not indispensable to
22 have all four of them. You would have little

1 choice.

2 So that's the distinction there
3 between what's indispensable is having access
4 to music and what you have choice, but little
5 choice, is having access to all four of them
6 simultaneously.

7 Does that help?

8 MR. STEINTHAL: Well, the beauty
9 of the transcript is to be able to line them
10 up one next to the other when the transcript
11 comes in, but I hear what you're saying now,
12 yes.

13 BY MR. STEINTHAL:

14 Q Now, your entire analysis proceeds
15 from the notion that this is a joint venture
16 in which the labels are entitled to get a
17 percentage of the surplus; isn't that right?

18 A Once again, I think you're just
19 mischaracterizing. I don't recall ever using
20 the word "joint venture" or saying that or
21 using it anywhere. A joint venture is
22 something entirely different.

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1 Q I didn't quote you, sir. I'm
2 asking you whether the premise of your
3 analysis is that you're looking at this as if
4 it's a joint venture in which the labels and
5 the webcasters are sharing a pool of revenue.

6 A You know, that's a mischaracter --
7 that's incorrect. A joint venture has a
8 specific legal meaning. We're not talking
9 about joint ventures here. We're talking
10 about a marketplace where a buyer and seller
11 come together. It's -- you're not properly
12 characterizing what I've said.

13 Q Well, you'd agree with me,
14 wouldn't you, that the webcasters and the
15 labels -- strike that.

16 You'd agree with me, wouldn't you,
17 that the labels aren't sharing in the risk and
18 investments that the webcasters have made in
19 connection with their webcasting businesses,
20 right?

21 A No, that's not correct.

22 Q Well, to what extend under your

1 proposal do the labels pick up any of the
2 losses that an Internet radio service may have
3 if you have your way and the royalties are
4 more than tripled over what the current
5 royalties are?

6 A Well, there are at least three
7 ways that this imposes risks on the record
8 labels. First off, there's risk that went
9 into in great detail that this music could be
10 ripped or otherwise. Let me speak louder.

11 There's at least three ways that
12 this poses potential risks for the record
13 labels. First off, there's a risk that we
14 went into in great detail that this could
15 jeopardize their other revenue streams either
16 indirectly as people just shift their
17 listening time to Internet radio from other
18 sources. I now, for instance, spend more time
19 listening to Internet radio and less time
20 buying and listening to CDs, and many other
21 people may make that choice.

22 That jeopardizes some very major

1 revenue streams.

2 Secondly, as you may recall, the
3 very top of my proposal explicitly talked
4 about risk sharing through revenue sharing.
5 So my proposal was that the buyers and sellers
6 would to some extent, not completely, but to
7 some extent, share in the up side and the down
8 side of revenues that are higher or lower than
9 what we anticipated.

10 So there are at least those ways
11 that risks -- that the webcasters bear some
12 risk, and finally, the third way is that
13 ultimately to be successful and to be viable,
14 they have to produce music. It's not like
15 this music just came from the sky and then
16 they just have it to sell. They have to
17 invest in artists and develop artists.
18 That's how new creative works are created.

19 And if they don't have revenues to
20 do that, then they risk going out of
21 business, and so you need to have a mechanism
22 that would allow them in all of their

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1 different areas to have way of capturing
2 revenue.

3 Q Let me get this right. Are you
4 suggesting that the labels run the risk of
5 going out of business if this panel doesn't
6 set a rate as high as the one that you're
7 suggesting?

8 A That's not what I said. What I
9 said is they have to capture revenues from all
10 of the different channels. Ultimately if they
11 don't capture revenues, then they won't be
12 able to continue to produce new music, and
13 that includes revenues from this channel.
14 There's no reason this channel should be
15 excepted.

16 Q You'd agree with me that the
17 amount of revenues that this channel is
18 currently generating is less than a tenth of
19 one percent of what the label's revenues from
20 distribution of sound recordings are, correct?

21 A I think --

22 Q Just yes or no, please.

1 A I think it's in that general area
2 today, and we know that it's growing quite
3 rapidly.

4 Q So when you talk about risk and
5 the risk that if the rate isn't set at three
6 times the current rate or more the labels
7 might have to go out of business, that's not
8 a legitimate suggestion, is it?

9 A I think you may be
10 misunderstanding how to think about the
11 different potential revenue streams. There
12 are lots of different areas where the labels
13 earn small amounts of revenue. In the State
14 of Maine, they sell not very many CDs. In the
15 Pleasanton, California, they sell not a whole
16 lot of downloads.

17 You could go through each of those
18 and say, well, that's only less than a tenth
19 of one percent of the overall market. Let's
20 not worry about any revenues they received
21 from that marketplace.

22 You do that for each of the tenth

1 of a percent and ultimately they're not --
2 you're not earning any revenues. There's not
3 reason that this market should get special
4 treatment compared to the State of Maine or
5 some small town in California or any of the
6 other tenth of a percent of a market you could
7 look at. That's just fallacious reasoning.

8 Q So other than the risks you've
9 identified, were there any other risks that
10 the labels share associated with the
11 webcaster's business?

12 A Not that I can think of right now.

13 Q But you would agree with me,
14 wouldn't you, that if things don't work out
15 for a given webcaster and that webcaster loses
16 whatever amount of money they lose, the labels
17 have no sharing in those risks, right?

18 A There are certainly risks that the
19 labels don't share in, as well as those that
20 they do share in, and I think by and large, as
21 far as I know, they haven't made, you know,
22 loans or other financial commitments.

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1 Q So you're proposing, just so it's
2 clear that the labels get the up side, the
3 percentage in the revenues, without the down
4 side if the webcasters end up going in the
5 tank, right?

6 A No, that's not correct.

7 Q Well, in what respect do the
8 labels share in the losses that webcasters may
9 incur if this rate is set too high?

10 A Well, as I mentioned, part of my
11 proposal is that there be revenue sharing, and
12 that means that if the revenues end up being
13 less than projected, the labels would earn
14 less than we projected. If it ended up being
15 more, they would earn more.

16 So they share partially, but they
17 don't -- they're not -- they don't share
18 completely. I don't think they insure and
19 insulate the webcasters, no.

20 Q What you're talking about is
21 sharing in less revenue, not sharing in
22 losses, right, to be clear?

1 A The labels have a set of risks
2 that I've enumerated which may be costly to
3 them. The webcasters have a set of risks, and
4 in the revenues they would share in those.
5 Certainly there are places where the revenues
6 -- where the labels risk losses, for instance,
7 in other music channels.

8 Q You acknowledge, do you not, that
9 many webcasters have sunk a substantial amount
10 of money in the technology and in investing in
11 the webcasting business?

12 A Yes, they have.

13 Q And I think you acknowledged today
14 and in your written testimony that the labels
15 don't -- strike that -- the labels are not in
16 a position where they have any -- strike that.
17 I have to reformulate this. I'm sorry.

18 You acknowledge, do you not, that
19 the recording companies don't have any need to
20 license the webcasters in order to be
21 successful?

22 A They don't have any need? Well,

1 there are potential revenues that they could
2 earn there. So if they wanted to earn those
3 revenues, they would want to license to them,
4 but there are other channels that they could
5 sell their music.

6 Q And, indeed, the amount of money
7 that they look at this market representing is
8 so small that you concluded, as you say on
9 page 6 of your written testimony, "Record
10 companies, on the other hand, do not have the
11 same need to sell to all or even any
12 webcasters in order to be successful." You
13 said that in your written testimony, right?

14 A Yes, and just to be fair, they
15 don't have the same need as the webcasters I
16 think is what it's referring to.

17 Q And one of the reasons is because
18 the amount of money that this market
19 represents to the labels is less than one
20 tenth of one percent of their total revenues,
21 right? So it's just not that big a deal.

22 A It gives them a lot of bargaining

1 power to capture a bigger share of the
2 revenue.

3 Q And you've acknowledged in your
4 testimony, in particular at your deposition,
5 have you not, that the labels' marginal cost
6 of distribution via webcasting is zero or near
7 zero, correct?

8 A the first marginal costs are close
9 to zero. Probably the most important cost
10 would be losses of revenue from other
11 channels, the extent to which people
12 substituted listening to Internet radio for
13 other revenue streams.

14 Q So to the extent that we're
15 demonstrating that there was some
16 substitutional loss, that would be their cost,
17 but other than that their marginal cost is
18 zero, correct?

19 A Yes, that's correct.

20 Q Now, you gave the example of a pen
21 earlier today. Do you remember that?

22 A This one right here.

1 Q And you gave the example of a
2 situation where a buyer had a willingness to
3 pay one dollar and the seller had costs of 40
4 cents, and so the remainder, the 60 cents was
5 a surplus, right?

6 A Yes.

7 Q But isn't it true, sir, that the
8 willingness to pay of a given user is a
9 variable issue in and of itself?

10 A I'm not sure what you mean.

11 Q Well, let me give you an example,
12 the soda on the beach example.

13 A Okay.

14 Q Okay? If I am sitting out there
15 in 100 degree heat and there's no other place
16 I can go to get a soda, I may be willing to
17 spend ten dollars on a nice, old Coke, even
18 thought the actual cost may be a quarter,
19 right?

20 A The cost of producing the Coke?

21 Q Yes.

22 A And delivering it? That's

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1 possible, yes.

2 Q And even though in a supermarket
3 situation the selling price of that same Coke
4 could be 30 cents per can, right?

5 A The Coke in the supermarket versus
6 the Coke on the beach.

7 Q Correct.

8 A Those are in some sense different
9 products.

10 Q Correct. Is that right?

11 A Yes.

12 Q So that the willingness to pay for
13 a good or input may very well depend on the
14 market circumstances that you're analyzing,
15 right?

16 A Yes, that's true.

17 Q And in a hypothetical, perfectly
18 competitive market where there are lots of
19 willing sellers and lots of buyers, the price
20 tends to follow towards the equilibrium price
21 in economic terms, right?

22 A A perfectly competitive market? I

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1 actually don't see the relevance of a
2 perfectly competitive market. Just as I
3 described, that's a very different kind
4 marketplace.

5 Q Indulge me if you will.

6 A Okay.

7 Q In the perfectly competitive
8 market, the price would be at or near, as we
9 discussed before, the margin cost of
10 production and distribution of the good,
11 right?

12 A That's a common definition of a
13 perfectly competitive market.

14 Q So it would take out of
15 consideration the particular economic
16 circumstances and demand curve of a given
17 purchaser like the soda on the beach
18 purchaser, right?

19 A Well, as I pointed out when you
20 were talking about that, the soda on the beach
21 is a different product than the soda in the
22 supermarket. So there may be some different

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1 costs associated with that. So really there's
2 differences in both the demand side and the
3 supply side of the example you're
4 constructing.

5 Q Now, in your testimony today, you
6 talked about potential indirect benefits, I
7 think was your term, that a portal like Yahoo
8 or AOL might have associated with their
9 overall product offering, correct?

10 A Yes, that's correct.

11 Q And it was your testimony, as it
12 not, that there are indirect benefits to the
13 non-music aspects of Yahoo and the non-music
14 aspects of AOL associated with being able to
15 offer an Internet radio product, correct?

16 A That's correct. That's what Bob
17 Roback said in his testimony. That's what AOL
18 said, said that people who visit their site
19 often come through their home page, and
20 therefore, they would view ads on that site.

21 Q Well, they will both testify and
22 explain exactly what they said in their

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1 deposition before the panel. My question to
2 you is in your judgment because you put in
3 your written testimony before they ever
4 testified, you felt that there was this
5 indirect benefit, right?

6 A Yes, that's correct.

7 Q And you based that on your opinion
8 that there were some benefits to be derived by
9 the greater Yahoo or the greater AOL by having
10 an Internet radio portion of their portal,
11 correct?

12 A It's my expert opinion based on
13 discussions with people in the industry for
14 the past 15 years that that's a critical part
15 of the strategy. That's why an organization
16 like Yahoo has so many different services. It
17 is precisely so that they can capture some of
18 the spillovers from the one part of their
19 service and capture that revenue in other
20 parts of their service.

21 Q It cuts both ways though, doesn't
22 it?

1 A It can.

2 Q And you didn't seek to measure,
3 did you, the extent to which people who would
4 not otherwise visit Yahoo music or AOL music
5 come to Yahoo personals or Yahoo search and
6 then, because Yahoo music is promoted there,
7 go to Yahoo music? You didn't seek to measure
8 that reverse spillover, did you?

9 A Well, just to be clear, I didn't
10 measure or quantify the spillovers in either
11 direction. They didn't appear in my
12 estimates.

13 Q Well, you testified this morning
14 that the spillover exists one way, but you
15 didn't talk about it the other way. You'd
16 agree with me it goes both ways, right?

17 A I've seen clear evidence that
18 there is a spillover benefit to revenue
19 gathered in the website, and it's quite
20 possible that the whole is greater than the
21 sum of the parts. So you seem to be thinking
22 about if it's some sort of a zero sum gain.

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1 That's not correct at all. It may well be
2 that the presence of Yahoo music makes the
3 whole enterprise more valuable than it would
4 be if Yahoo music weren't there. So in that
5 sense, the total enterprise value and the
6 total revenues earned would be greater, and
7 that would be the one that you'd want to look
8 at if you were understanding the economic
9 value of music to Yahoo.

10 Q And it may well be that there is
11 revenue driven to Yahoo music that would not
12 otherwise be there but for the fact that
13 Yahoo personals, Yahoo search, Yahoo whoever
14 else Yahoo offers was not first there to
15 attract the visitor into the service, right?

16 A I certainly think that Yahoo adds
17 some value and so do the other webcasters, and
18 I think that a willing buyer and a willing
19 seller, when they got together, the webcasters
20 would have some bargaining power and be able
21 to capture some share of the value, probably
22 about 25 percent of the value.

1 Q Twenty-five percent relates to
2 what?

3 A Well, that reflects how much value
4 that -- that reflects the bargaining power
5 that they have, and in part the bargaining
6 power reflects the fact that Yahoo can offer
7 a proposition, a way of distributing this
8 music that perhaps a needs study at my own
9 shop might not so easily be able to offer.
10 While I could enter the market, Yahoo is in a
11 position to bargain for more than zero percent
12 of the surplus.

13 Q Let me go back and ask it this
14 way. As you sit here today, do you have any
15 evidence that the spillover benefit from non-
16 music sites within ASCAP or AOL II to the
17 benefit of music, people that would not
18 otherwise be going to music that go there
19 because they first came to other aspects of
20 the website? Do you have any evidence that
21 that spillover to the benefit of the music
22 site is any greater or lesser than the

1 spillover that goes the other way?

2 A I'm sorry. ASCAP or AOL?

3 Q I don't think I said ASCAP.

4 PARTICIPANT: You did actually.

5 MR. STEINTHAL: Wow, sorry. We'll
6 get there.

7 BY MR. STEINTHAL:

8 Q Do you have any evidence that the
9 spillover that benefits the music portions of
10 the portal at AOL or Yahoo by virtue of people
11 that go to non-music aspects of the portal are
12 any greater or lesser than the spillover
13 benefits that go the other way, people going
14 to music and then after going to music convey
15 some benefit to the other aspects of Yahoo or
16 AOL?

17 A Well, let me just reiterate so
18 that there's no misunderstanding. This is not
19 part of my economic analysis in terms of the
20 rate that I came up with, but since you asked
21 the question, let me clarify. It's quite
22 possible that Yahoo as a whole gets -- the

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1 flow of the spillover is one direction or the
2 other. They don't cancel each other out. You
3 can have it, and indeed, the business model's
4 premised on the idea that you've got synergies
5 if you complementary these; that a set of
6 properties that leverage each other is more
7 valuable than those properties in isolation or
8 stand alone.

9 So it's a misunderstanding of the
10 economics to try to somehow equate spillovers
11 in one direction or the other or weigh them
12 one against the other. What matters is how
13 much value Yahoo music creates for Yahoo as a
14 whole overall. How would Yahoo -- how much
15 value would they have if for some reason they
16 couldn't offer Yahoo music? If they were in
17 a bargaining situation with the owners of the
18 copyrighted music, they would have to bargain
19 over that value, and the value that would be
20 at risk for Yahoo would be the synergies, the
21 additional value to be created overall for
22 Yahoo as an enterprise, and that would an

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1 amount of surplus that they would take into
2 consideration, a rational business person
3 would take into consideration when they
4 decided whether or not to do the deal.

5 This issue about measuring the
6 flows, you know, one way versus the other not
7 only wasn't in my model, but it's not even --
8 even the words to include spillovers wouldn't
9 be the way one would go about analyzing it.

10 Q I promise you if you hadn't
11 testified about the spillover this morning to
12 the benefit of the music part of these
13 websites, I would not have asked you these
14 questions. Okay?

15 You're familiar with the fact that
16 there are times when a portal has an aspect of
17 their website that they shut down?

18 A Yes, I am.

19 Q So presumably the sum of all the
20 parts, including the parts that they shut down
21 occasionally is not greater than the
22 individual components added up.

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1 A A lot of companies fell by the
2 wayside realizing that you couldn't just
3 willy-nilly list a bunch of services and
4 assume that that amounted to a viable business
5 model.

6 Q Now, Professor, your model is
7 premised, is it not, on calculating the
8 surplus as you call it and splitting it up
9 between the sound recording copyright owners
10 and the webcasters based on their relative
11 bargaining power? That's a neutral enough
12 statement, right?

13 A Yes, that's a correct
14 characterization.

15 Q Okay. And you reached your
16 conclusions based on estimating the
17 webcasters' costs and revenues, correct?

18 A Yes, that's correct.

19 Q And because the licenses to the
20 sound recordings are as a whole anyway
21 indispensable. That's where you used the word
22 "indispensable."

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1 A They certainly need music to
2 produce webcasting. It's indispensable.

3 Q Right. And it's an indispensable
4 good, giving the sound recording owner
5 substantial bargaining power and, therefore,
6 the 75 percent number that you got to as to
7 what portion of the surplus they'd get, right,
8 in a nutshell?

9 A That's correct.

10 Q Now, assume the identical market
11 characteristics for the buyers in terms of
12 their indispensable need for a related input.
13 Wouldn't you expect to see the same result?

14 A Not necessarily.

15 Q Well, you would agree that the
16 same concepts would apply that would be a
17 function of bargaining power and the
18 alternatives that the buyers have?

19 A It would be a function of
20 bargaining power, the alternatives, the
21 relative value that was created, the surplus
22 that was created. These are -- yes, these are

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1 fundamental principles.

2 Q Where did that word come in? You
3 said "relative value"? I haven't heard you
4 say "relative value" at all today.

5 A Well, that's because you -- before
6 you didn't -- this is the first time you asked
7 me to compare it to a different market. So
8 we're comparing a value from one market to
9 another.

10 Q Oh, but you postulated a model
11 based on certain characteristics of the buyers
12 who have a need for an input, indeed, an
13 indispensable input for their service. You've
14 added up the costs, and then you've divided
15 the surplus between the sound recording
16 owners, who are the providers of that
17 indispensable input and the webcasters based
18 on your view of the bargaining leverage
19 between the two, right?

20 A Yes, that's correct.

21 Q Now, how, if at all, would that
22 analysis be any different with respect to the

1 providers of the musical work component of the
2 very same sound recordings that are being
3 accessed by the webcasters under the statutory
4 license?

5 A Well, I haven't done an analysis
6 of the musical work industry. So that's not
7 what I did my analysis of, but one can see
8 some immediate differences just by looking at
9 it. One is that it's clear that people do
10 have a different value for musical work,
11 copyrights versus for sound recording
12 copyrights, and that protects the bargaining
13 power that different parties would have.

14 For instance, if Mick Jagger were
15 to sing "Happy Birthday," I suspect a lot of
16 people would pay a lot of money for that,
17 whereas if I were to sing "I Can't Get No
18 Satisfaction" I don't know that anyone would
19 pay anything for that.

20 So it does depend. The sound
21 recordings are distinct and separate from the
22 copyrights, and people who are bargaining with

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1 the owners of those assets would take that
2 into account in terms of what they pay.

3 I mean, to give another example of
4 an input that you didn't list, you could say
5 that having webcasting equipment, computer
6 equipment is indispensable to webcasting. You
7 definitely need webcasting equipment, but
8 again, there are lots of different people you
9 could buy that from, and having Dell's web
10 servers versus Sun's web servers, people don't
11 care that much which web server they're
12 buying. So Dell and Hewlett-Packard and Sun
13 don't have as much bargaining power as, say,
14 the Beatles and Madonna and the Rolling Stones
15 do for people who are looking to buy those
16 particular sound recordings.

17 So the fact that you need a
18 particular input, web servers or music work
19 copyrights or sound recordings isn't
20 sufficient to completely tell you what the
21 outcome is going to be. It's one of the
22 factors you have to weigh, but you need to

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1 consider the relative bargaining power as
2 well, and that's going to depend on the
3 relative value.

4 Q Let's parse through your answer
5 there. First of all, the thing that initially
6 jumps out is you mentioned the situation of
7 the two computers.

8 A Yes.

9 Q One is a substitute for the other,
10 isn't it? If I don't buy from Dell, I can buy
11 from another supplier, right? Just yes or no.

12 A Dell would argue that there are
13 advantages to their servers.

14 Q But I can buy servers from someone
15 else and get functionally a comparable --

16 A You don't get Dell's service and
17 support.

18 Q Excuse me?

19 A You don't get Dell's service and
20 support, and you may not get Dell's record of
21 reliability.

22 Q Are you going to tell me that

1 computer companies and server supplies don't
2 compete with one another?

3 A I'm not and I didn't.

4 Q All right. They compete with one
5 another to get the sale of a product, one
6 product that's going to be used by the buyer
7 as between the two that are trying to sell it,
8 right?

9 A The buyer will look at the
10 relative value of one competitor's product
11 versus another competitor's product and
12 decide whether they are willing to pay a
13 premium for it. Some people may well be
14 willing to pay a premium for Dell servers.
15 Again, that's another market that I haven't
16 analyzed in depth, but do you want me to kind
17 of give you my analysis of it I'm happy. And
18 so, therefore, they would be in a position to
19 capture some part of the value they create,
20 but a relatively small part because they don't
21 have a lot of bargaining power.

22 The webcasters in that situation

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1 are in a much stronger bargaining position and
2 they're able to say no. We're not going to
3 give you a big share of this.

4 Conversely, in the case of sound
5 recordings, it's my judgment that there is not
6 a great substitute. If a person wants to
7 listen to the Beatles and you say, "Well, we
8 don't have the Beatles, we can give you the
9 Bangles," then a lot of customers will say,
10 "You know, that's not a very good substitute,"
11 and I'm not willing to pay for the Bangles
12 when what I want to listen to is the Beatles."

13 So you're going to have a much
14 different situation, a much different amount
15 of bargaining power. It's not that the server
16 isn't indispensable. It is absolutely
17 necessary, but as you can see, the bargaining
18 power is quite different.

19 Q Because you have different choices
20 as the buyer when it comes to the server,
21 whereas as you say, buying the sound
22 recordings you have very little choice but to

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1 get a license from all the majors, right?

2 A You have relatively little choice
3 in part because people value those sound
4 recordings.

5 Q Now, let's compare musical works
6 to your server situation. It's totally
7 different, isn't it? In other words --

8 A Server situation?

9 Q Well, you were talking about Dell
10 versus whoever your analogy was. When it
11 comes to the webcaster's need to acquire
12 rights to perform the musical works imbedded
13 in sound recordings, there's no substitute, is
14 there, for the musical works imbedded in those
15 sound recordings? Yes or no?

16 A Well, again, I haven't analyzed
17 this market in depth, but I believe that
18 people have the option of having different
19 artists record a given musical work and
20 different artists can record. You know, so
21 you could have different artists that were the
22 same musical work, or you could have the same

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1 artist doing different music works, and as far
2 as I'm aware, the market doesn't value those
3 identically.

4 Q Well, let's parse that through.
5 In the market for webcasting, you're familiar,
6 are you not with the fact that Sound Exchange
7 offers a blanket license, correct, that it
8 licenses to the webcasters under the statutory
9 license, right?

10 A Well, it's required to.

11 Q Are you familiar with the fact
12 that ASCAP and BMI are required to offer
13 blanket licenses to their musical works
14 repertoire to the webcasters?

15 A You know, I haven't read the
16 statutes. I believe there's a set of rules
17 that may or may not be the same as they are
18 for sound recordings about what they're
19 required to provide, what kind of constraints
20 they have, and their ability to compete
21 freely. I don't know whether the standard is
22 the same as the willing buyer?willing seller

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1 standard and whether there are other
2 constraints they need to factor in.

3 Q In terms of the webcasters as the
4 buyers, as you sit here today, do you think
5 there is any economic difference between the
6 circumstances of the willing buyer when it
7 must get a blanket license grant to the
8 musical works imbedded in sound recordings and
9 when it must, on the other side of the coin,
10 get a blanket license for the grant of the
11 sound recording rights in the exact same music
12 transmissions?

13 A I'm not in a position to make a
14 judgment about all of those assertions that
15 you just made that you think to be true. I
16 don't have a foundation to know whether or not
17 what you said is an accurate representation of
18 those markets.

19 Q Well, you made some judgments in
20 connection with your model. You made the
21 judgment to treat the musical work rights as
22 a cost item rather than as an item that would

1 be treated in the exact same fashion as sound
2 recording rights, did you not?

3 A Yeah, I was asked to analyze the
4 market for sound recordings, and so that was
5 the analysis and I was asked to analyze the
6 market for webserver. Then I would look at
7 the costs that had to be paid out in other
8 areas for musical works.

9 So you know, you can go through
10 all sorts of different inputs, but my
11 understanding is that there is an established
12 price, a little over five percent of revenues
13 that is customary. I don't know exactly the
14 set of legal rules for how they came to that
15 price and what standards were applied, but it
16 wasn't necessary for me to do my analysis to
17 go into that market.

18 Q And you understood that the ASCAP
19 BMI SESAC licenses representing a totality of
20 the performing rights organization licenses
21 were costing the webcasters 5.1 percent of
22 their revenues, correct?

1 A Yes, that's correct.

2 Q And you determined that you would
3 treat that input as a cost as distinguished
4 from the sound recording input which you were
5 going to subject to this cost analysis,
6 revenue analysis and surplus analysis, right?

7 A No. Let me explain again. When a
8 buyer and seller are negotiating, they're
9 going to look at the surplus that they can get
10 from if it worked together versus separately,
11 and that's going to be a function of the
12 surplus that they create by coming together
13 versus what they could get if they didn't work
14 together and their bargaining power.

15 That would be true if I analyzed
16 web servers or copyrights, music work
17 copyrights or sound recording copyrights. The
18 same general economic principles would apply
19 to any market, not applying any special rules
20 to one group or another.

21 But it is true that when you're
22 looking at one particular market, then it's

1 useful if there are stated posted prices for
2 the other inputs that have come through those
3 negotiations. You can just do as -- you don't
4 have to reinvent the wheel, you know. They've
5 negotiated what the price of web servers is.
6 I use this.

7 Now, if we were here trying to set
8 a ceiling on the prices for web servers, then
9 we'd have to analyze the bargaining power in
10 the web server market, who the competitors
11 are, what they could do if this competitor
12 held back or not, what value is being created,
13 and that would be a different analysis, and
14 then I would look at what the costs are being
15 paid for the other inputs and look at that
16 particular surplus.

17 So it's an exactly parallel
18 analysis across the board. It's a basic
19 business analysis.

20 Q Let me ask you this question
21 before we break. Assume that the musical work
22 is a necessary input no different than a sound

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1 recording is a necessary input for the
2 webcasters under the statutory license. Would
3 your model work just the same if we were to
4 try to find the appropriate rate as we did
5 with the sound recording input?

6 A Well, again, I'm not familiar with
7 all of the differences and the details of that
8 market, and I apologize I haven't come
9 prepared. I haven't analyzed. I don't even
10 know what the statutory rules are, whether
11 it's a willing buyer, willing seller, and so
12 forth. I haven't analyzed what the
13 competition is, what the market structure is,
14 what the value is.

15 The same economic principles would
16 apply. That is a fundamental way we do
17 analysis, but just because something is
18 indispensable, be it a web server or a musical
19 work copyright or a sound recording doesn't by
20 itself mean that your problem is solved. That
21 doesn't mean that, okay, we're done. You have
22 to consider all of these other factors that I

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1 went through in some detail.

2 And for me off the top of my head
3 to say, "Yeah, you know, we're done," that
4 would be malpractice.

5 MR. STEINTHAL: I think we're done
6 for the day, Your Honor. I'm about to go to
7 a different subject.

8 CHIEF JUDGE SLEDGE: Good timing.

9 Nearing the five o'clock hour, we
10 will recess today and return in the morning at
11 9:30 a.m.

12 (Whereupon, at 5:00 p.m., the
13 hearing was adjourned, to reconvene at 9:30
14 a.m., Tuesday, May 9, 2006.)

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CERTIFICATE

This is to certify that the foregoing
transcript in the matter of:

The Digital Performance Right in
Sound Recordings and Ephemeral
Recordings
Webcasting Rate Adjustment Proceeding


Before:

Copyright Royalty Board
Library of Congress

Date: May 8, 2006

Place: Washington, D.C.

represents the full and complete proceedings of
the aforementioned matter, as reported and
reduced to typewriting.


John Mongoven